PROJECT LICENSED PROFESSIONAL CERTIFICATES

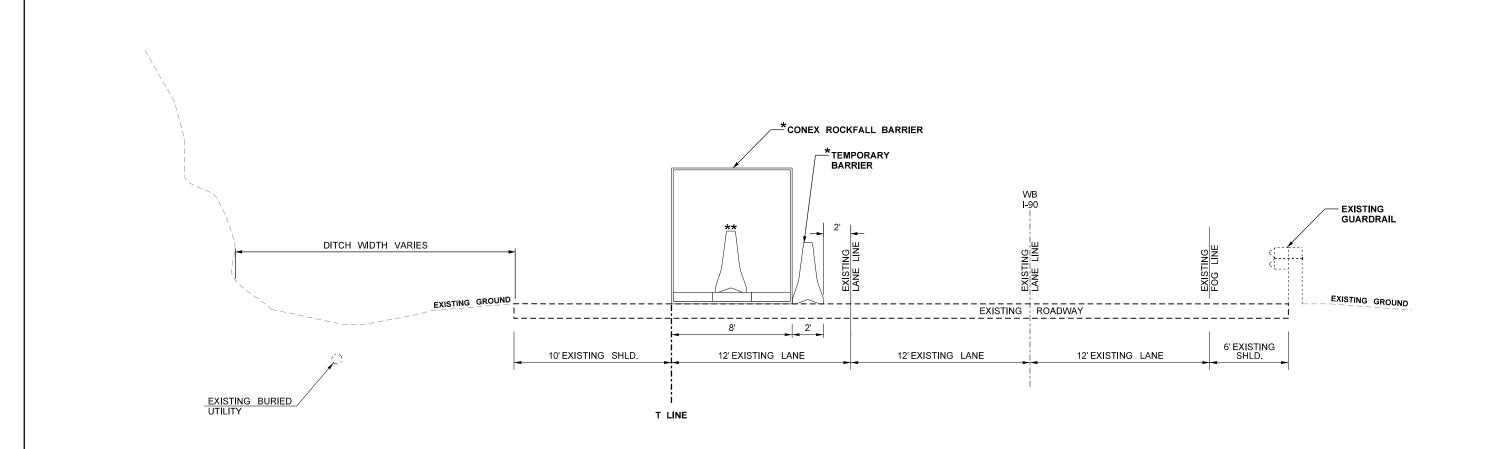
Kenny King Kenny King Jul 19, 2023			
AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.
AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.
AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.

IOTES:

THIS PLAN SET WAS DEVELOPED ELECTRONICALLY UNDER THE DIRECT SUPERVISION OF THE LICENSED PROFESSIONALS THAT HAVE AFFIXED THEIR SIGNATURE TO THIS PAGE.

THIS SHEET SERVES AS THE CERTIFICATION BY THE ABOVE LICENSED PROFESSIONALS OF ALL SHEETS IN THIS PLAN SET WHERE THEIR STAMPS AND SIGNATURES APPEAR.

REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY			P.E. STAMP BOX	P.E. STAMP BOX		SERVINION ONLE	
PROJ. ENGR.	K. KING						DATE	——————————————————————————————————————		CERTIFICATION SHEET	36 SHEETS
CHECKED BY	T. NETT				CONTRACT NO.	LOCATION NO.	1		Department of Transportation		- F
ENTERED BY	E. RODRIGUEZ				23Y009				_		SHEET 4
DESIGNED BY	A. MERCADO				JOB NUMBER				Washington State	WB - SLOPE STABILIZATION	OUEET
PLOTTED BY	Rodried				I IU WASH					2.77 MILES WEST OF TINKHAM RD	
DATE	7/19/2023				10 WASH						CT1
TIME	7:13:03 AM				REGION STATE	FED.AID PROJ.NO.				I-90	PLAN REF NO
FILE NAME	K:\452201\090\03995_TInkham	Slope Stabilization\Design_CAD_Sheets\015-Certification	n\XL6476_PS	S_CT.d	lgn						Plot 1



ROADWAY SECTION A

T LINE STA. 10+00 TO 59+00

NOT TO SCALE

- * SEE ROADWAY STAGING SHEETS SU1 SU3 FOR ACTUAL LOCATIONS OF CONEX AND TEMPORARY BARRIER.
- ** CONEX ROCKFALL BARRIER SHALL INCLUDE 3 12.5 L.F. SECTIONS OF CONCRETE BARRIER OR OTHER MATERIAL THAT WILL PROVIDE 6 TONS OF WEIGHT PLACED INSIDE EACH CONEX CONTAINER.

NOTES:

- EXISTING UTILITY LOCATIONS ARE APPROXIMATE.
 CONTRACTOR TO VERIFY IN THE FIELD.
- 2. SEE SHEETS RKD1 RKD6 FOR SLOPE SCALING, ROCK DOWEL AND HORIZONTAL DRAIN LAYOUT LOCATIONS.

FILE NAME	K:\452201\090\03995_TInkham	Slope Stabilization\Design_CAD_Sheets\050-RdwySec\)	(L6476_PS_R	≀S.dgn						1	Plot 1
TIME	7:25:27 AM				REGION STATE	FED.AID PROJ.NO.	RAYMON			l-90	PLAN REF NO
DATE	7/19/2023				10 WASH		Sign of Washing				RS1
PLOTTED BY	Rodried				IU WASH					2.77 MILES WEST OF TINKHAM RD	1.01
DESIGNED BY	A. MERCADO				JOB NUMBER		Men Kink		Washington State	WB - SLOPE STABILIZATION	SHEET
ENTERED BY	E. RODRIGUEZ				23Y009		56978		j		5
CHECKED BY	T. NETT				CONTRACT NO.	LOCATION NO.	STONAL EN		Department of Transportation	 	OF_
PROJ. ENGR.	K. KING						SEE SHEET CT1	DATE		ROADWAY SECTIONS	36 SHEETS
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY			P.E. STAMP BOX	P.E. STAMP BOX		<u> </u>	S. ALE 10

T. 23N. R. 9E. W.M. OPTIONAL HELICOPTER/EQUIPMENT /LAY DOWN ZONE SEE NOTE 2 BEGIN HVF T 14+00 (188.3'LT) **BEGIN NHPP-0901(508)** TEMPORARY CONSTRUCTION T 11+27.38 (187.96'LT) **BEGIN PROJECT BEGIN CONSTRUCTION BEGIN T LINE** I-90 MP 39.95 T 11+27.38 (107.96'LT) T LINE 10+00.00 SAFETY TREE-FELLING AREA SEE NOTE 2 SEE NOTE 4 REMOVING GUIDE POST T 10+00 TO T 24+00 - Ī-90 WB EXISTING ROADWAY 1 BEGIN REMOVING PLASTIC LINE (LANE LINE) EB EXISTING ROADWAY SOUTH FORK SNOQUALMIE RIVER LEGEND EXISTING EDGE OF PAVEMENT EXISTING GUARDRAIL NOTES EXISTING CONCRETE BARRIER 1. EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO BURIED FIBER OPTIC 2. SEE SPECIAL PROVISION "SLOPE SCALING VEGETATION REMOVAL" TREE LINE FOR DETAILS OF VEGETATION REMOVAL FROM THE SLOPE. WSDOT RIGHT OF WAY CONSTRUCTION NOTE: 3. SEE SHEETS RKD1 - RKD6 FOR SLOPE SCALING, ROCK DOWEL AND HORIZONTAL DRAIN LAYOUT LOCATIONS. O O WATTLE SEE SPECIAL PROVISION "REMOVING 4. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) BEST MANAGEMENT PRACTICES (BMPS) AS SHOWN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. CONSTRUCTION EASEMENT MISCELLANEOUS TRAFFIC ITEMS" 50 SCALE IN FEET FILE NAME K:\452201\090\03995_Tinkham Slope Stabilization\Design_CAD_Sheets\080-AlignPlan\XL6476_PS_ASP.dgn Plot 1 TIME 8:51:22 AM FED.AID PROJ.NO. I-90 PLAN REF N DATE 7/19/2023 ASP1 10 WASH 2.77 MILES WEST OF TINKHAM RD PLOTTED BY Rodried JOB NUMBER DESIGNED BY A. MERCADO **WB - SLOPE STABILIZATION** Washington State 23Y009 ENTERED BY B. PEART **Department of Transportation** CHECKED BY LOCATION NO. 36 SHEETS SEE SHEET CT1 ALIGNMENT / RIGHT OF WAY & PROJ. ENGR. K. KING DATE

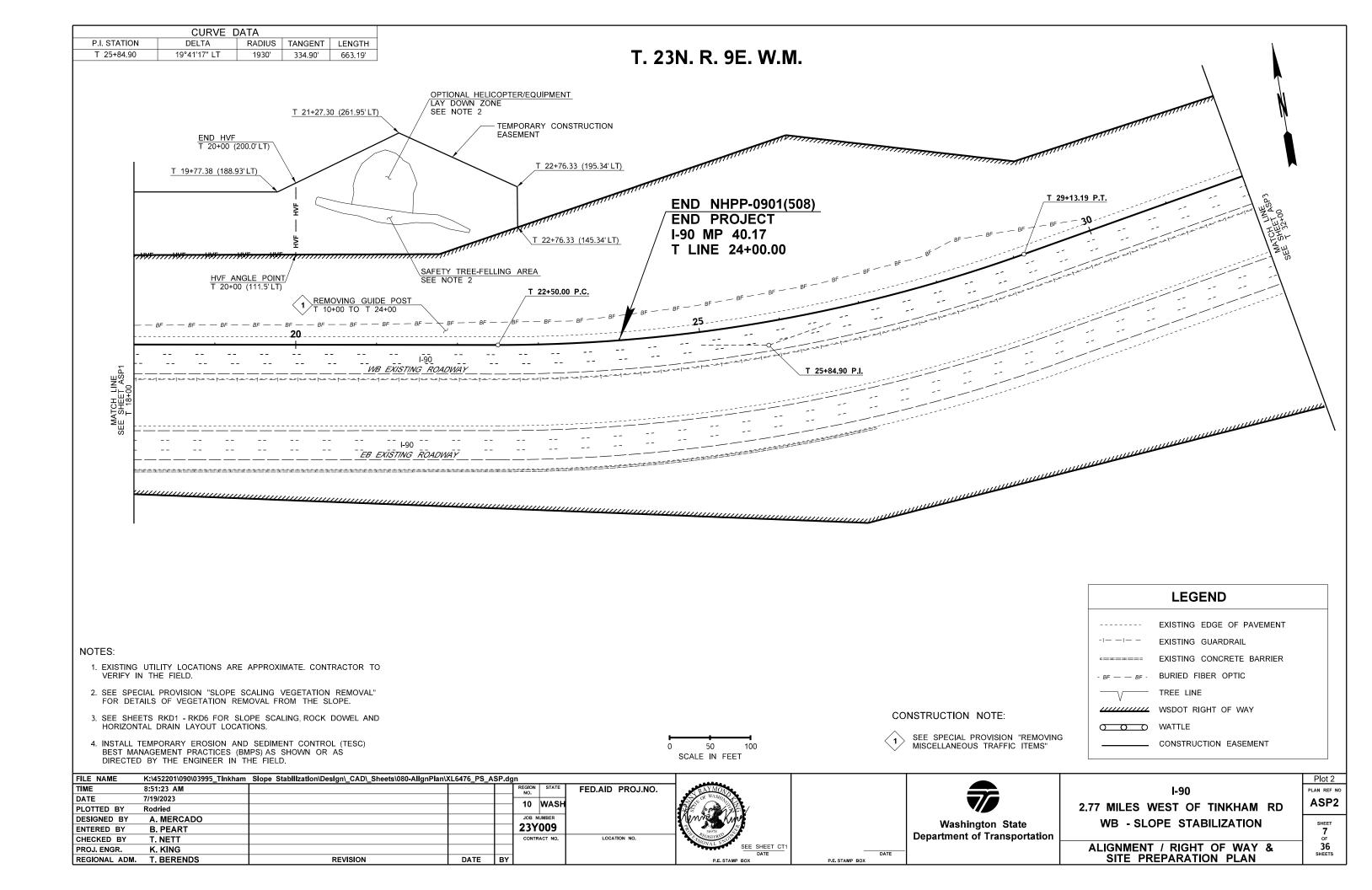
DATE

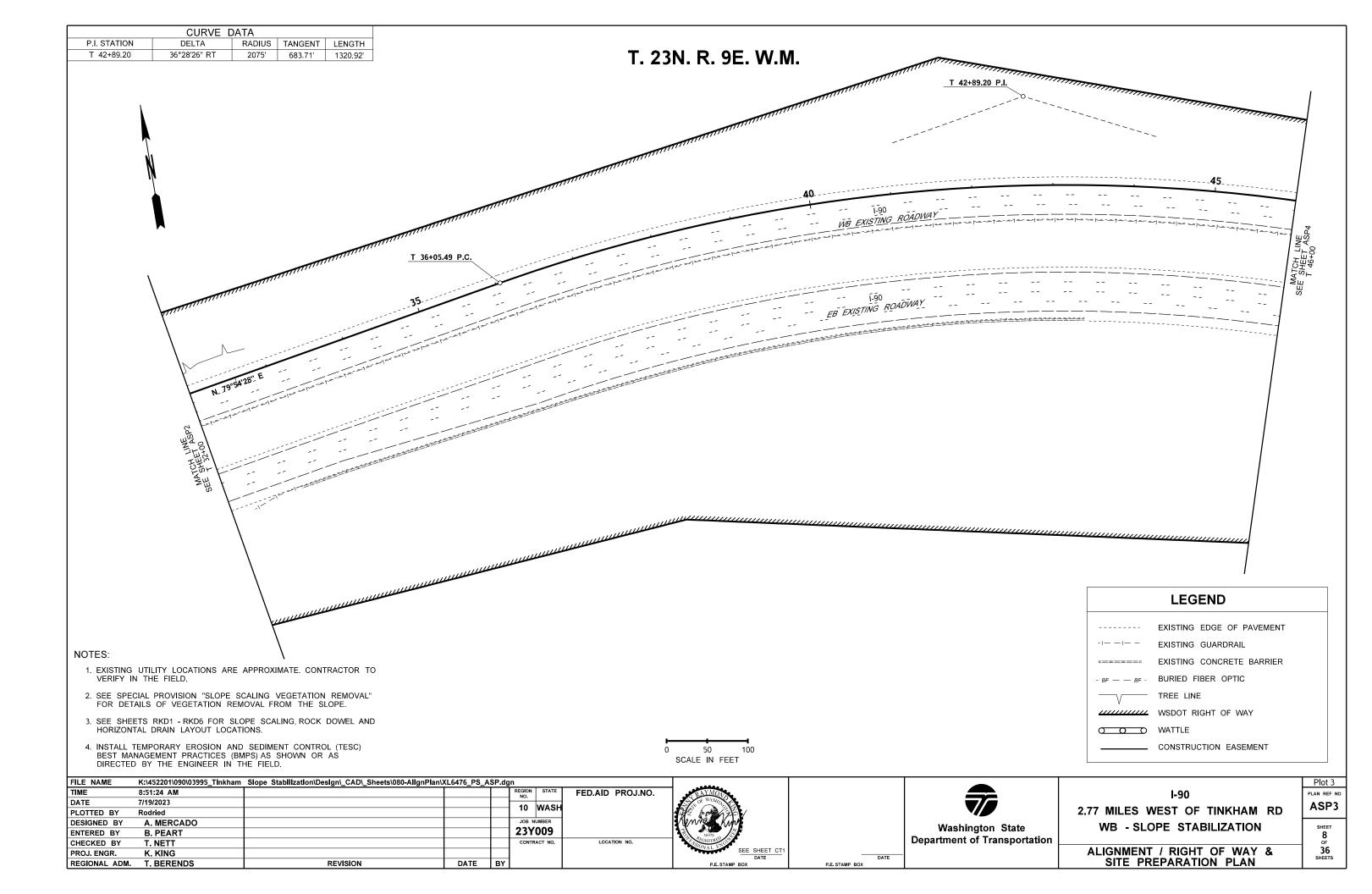
REVISION

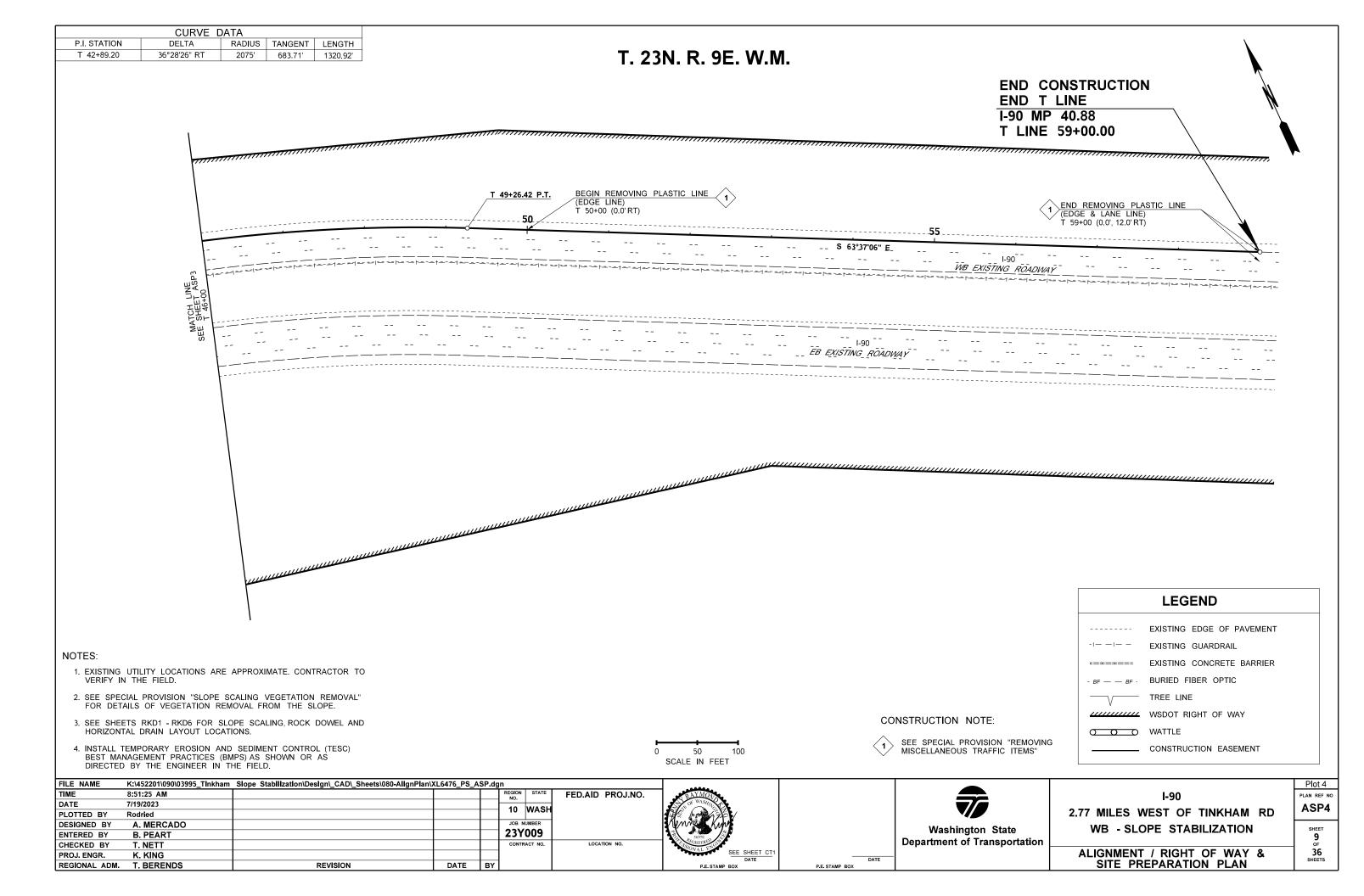
REGIONAL ADM. T. BERENDS

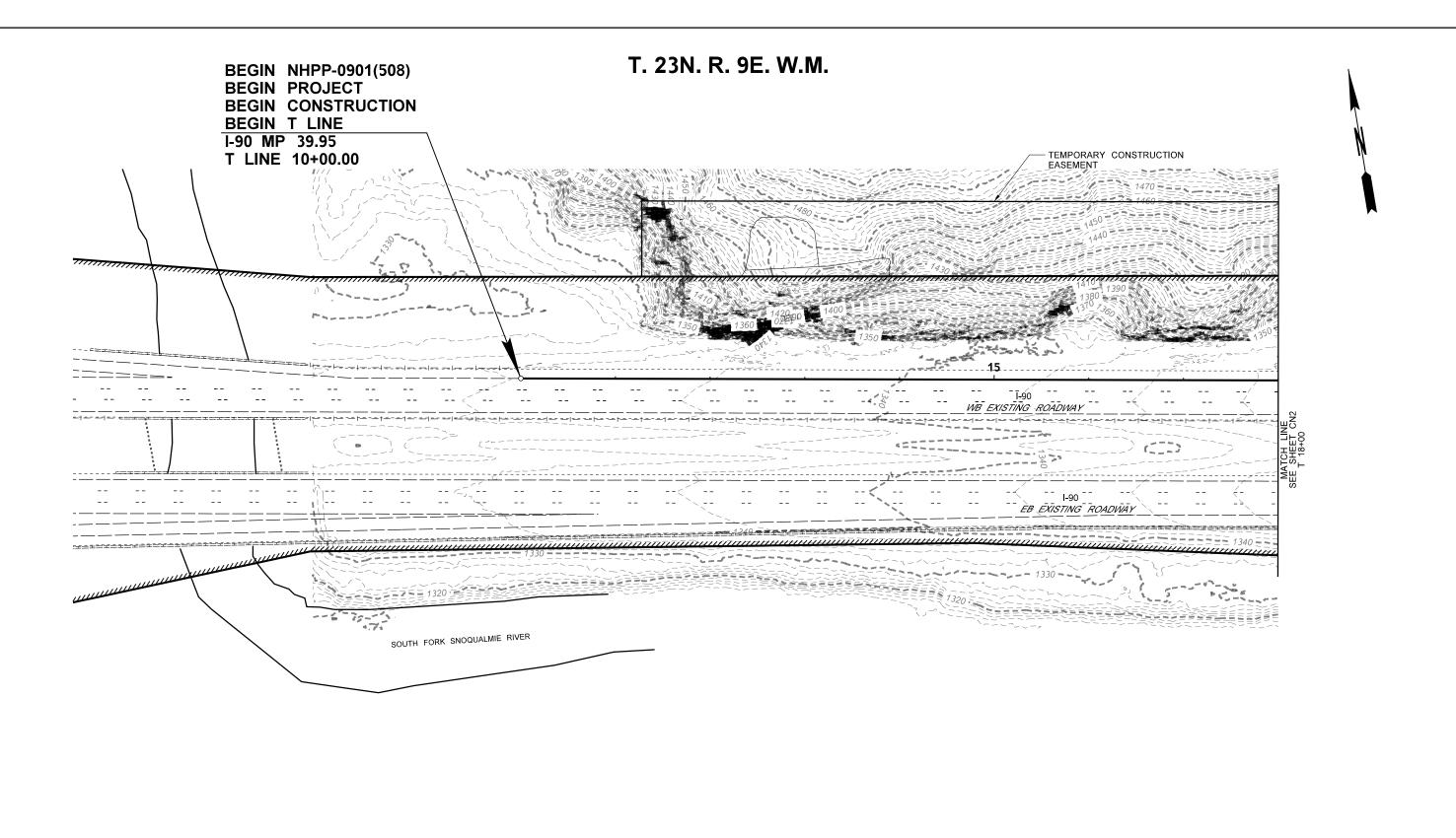
BY

SITE PREPARATION PLAN









0 50 100 SCALE IN FEET

NOTES:

 SEE SHEETS RKD1 - RKD6 FOR SLOPE SCALING, ROCK DOWEL AND HORIZONTAL DRAIN LAYOUT LOCATIONS.

FILE NAME	K:\452201\090\03995_TInkham	Slope Stabilization\Design_CAD_Sheets\080-AlignPlan\2	XL6476_PS_C	N.dgr	1			
TIME	9:04:37 AM				REGION NO.	STATE	FED.AID PROJ.NO.	RAYMOV
DATE	7/19/2023					WASH		1 1 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
PLOTTED BY	Rodried				1 10	WASH		
DESIGNED BY	A. MERCADO					NUMBER		hemo
ENTERED BY	B. PEART				23Y	′009		569
CHECKED BY	T. NETT				CONTR	RACT NO.	LOCATION NO.	STONAL ENG
PROJ. ENGR.	K. KING				1			
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY	1			P.E. STA

Sir WASHING	and the same of th	/	
AEGISTERED CO	SEE	SHEET	CT1
		DATE	_
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7	
Washington State Department of Transportation	
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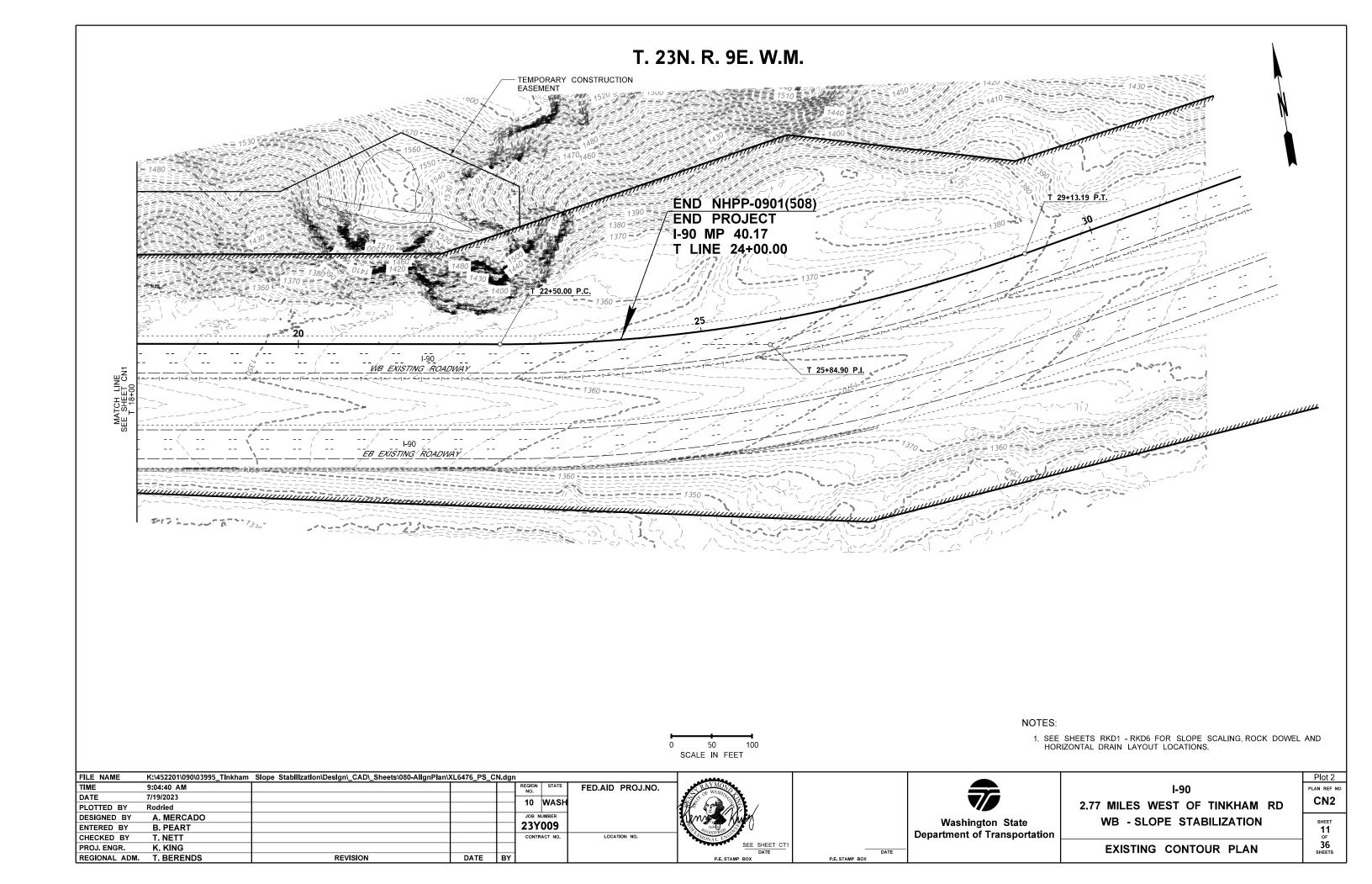
I-90									
2.77	MIL	.ES	WEST	OF	TINKHAM	RD			
١	WB	- SI	LOPE	STAE	BILIZATION				

Plot 1

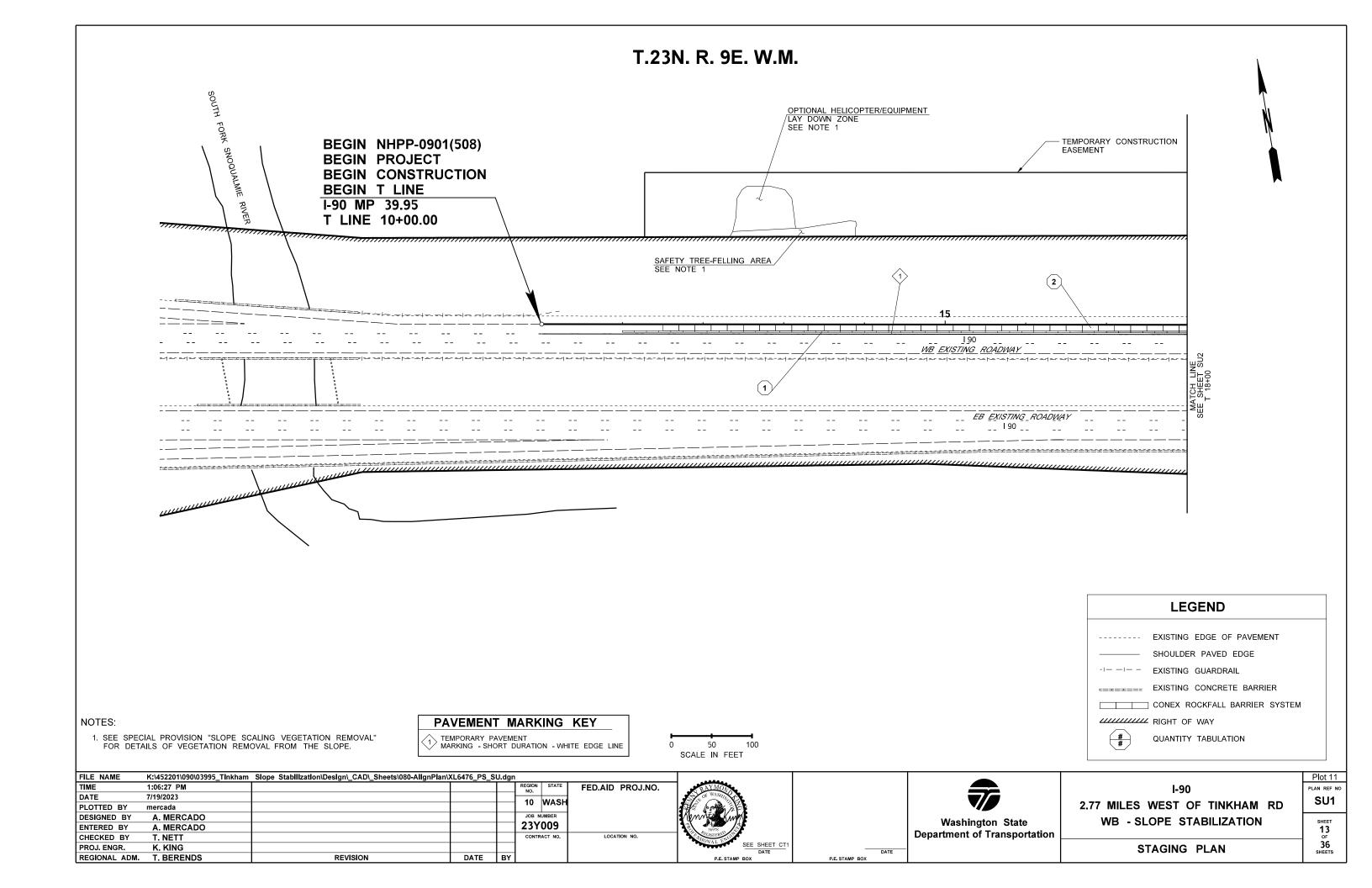
CN1

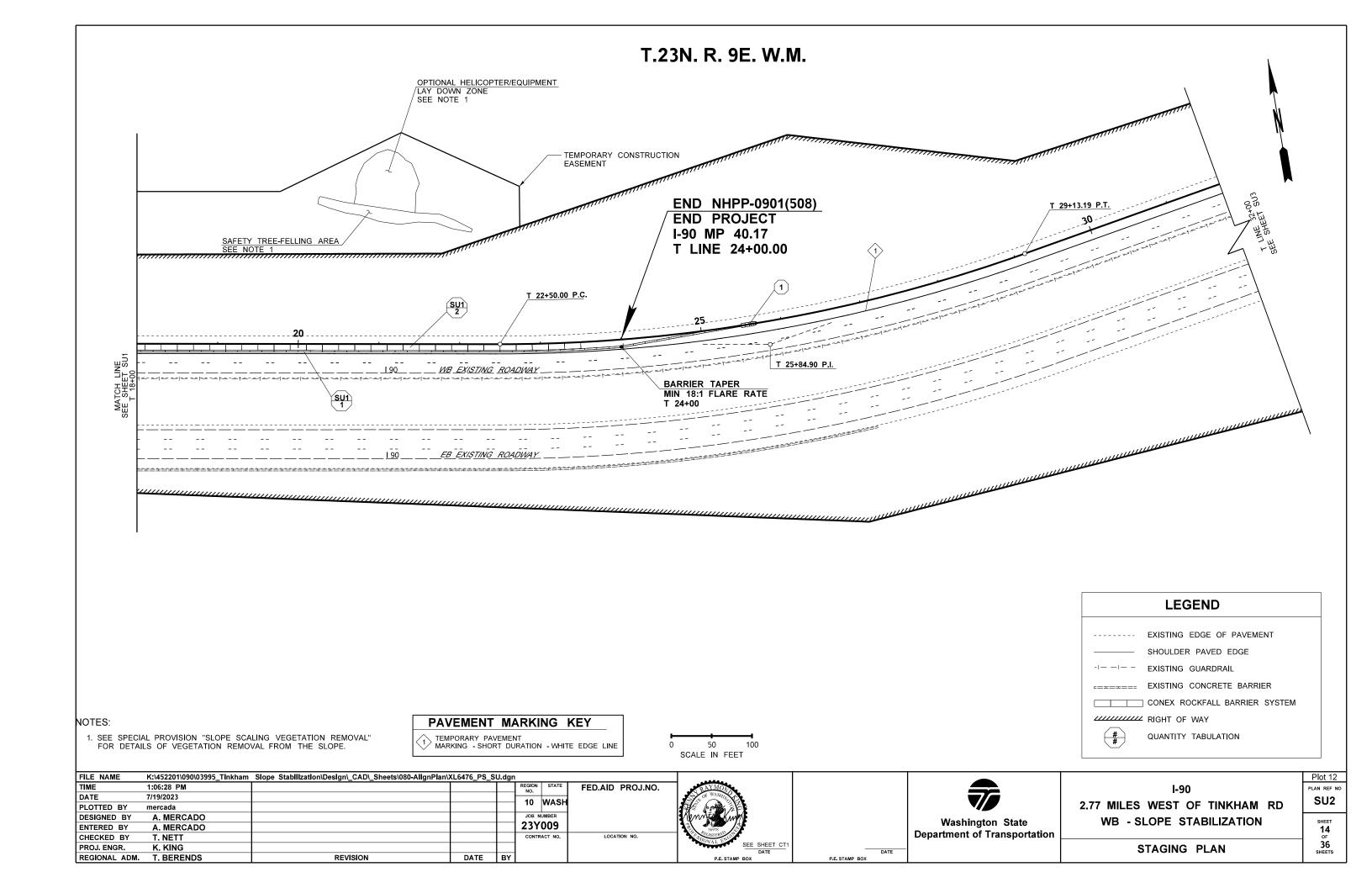
10 of 36 sheets

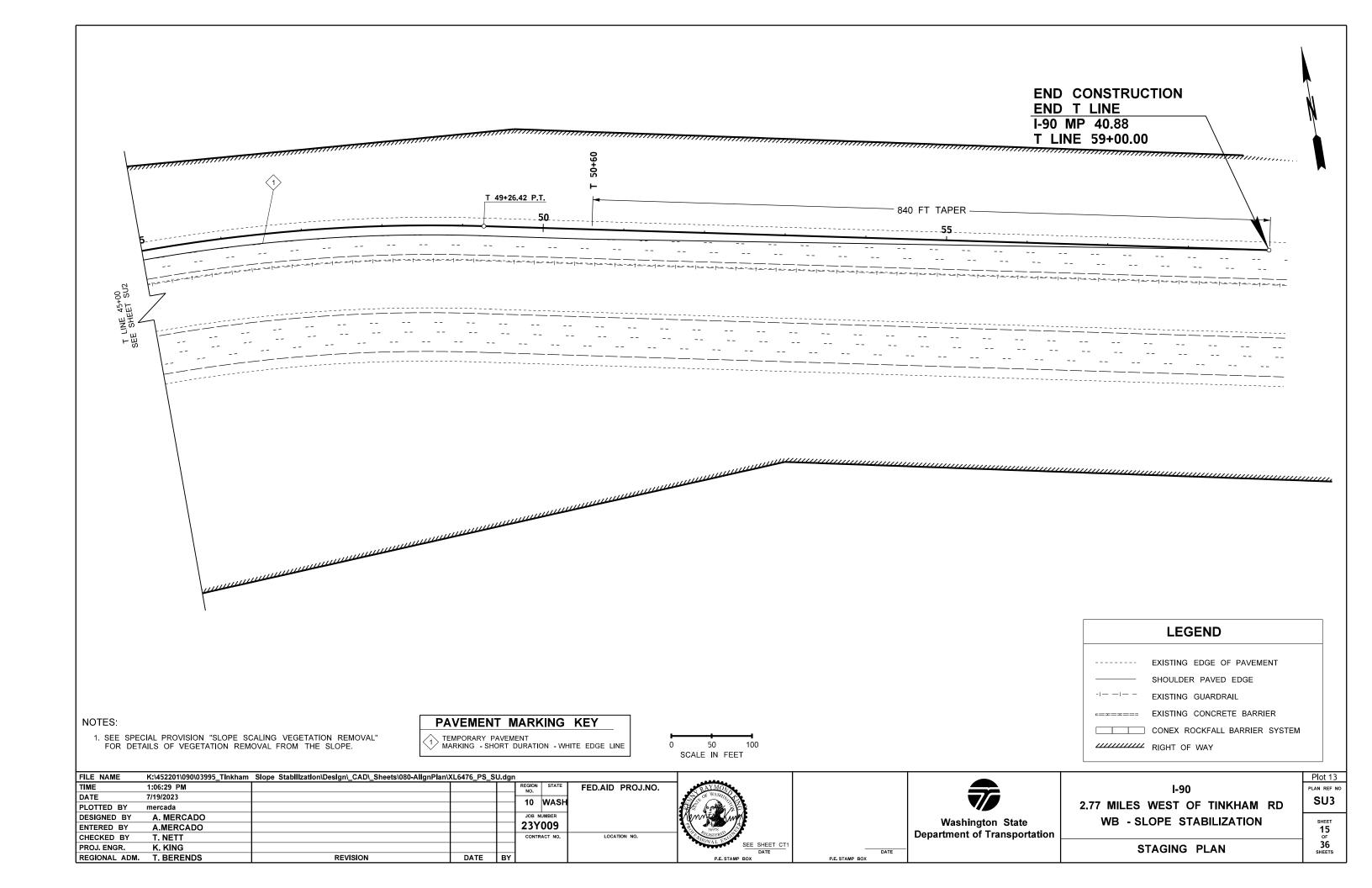
EXISTING	CONTOUR	PLAN
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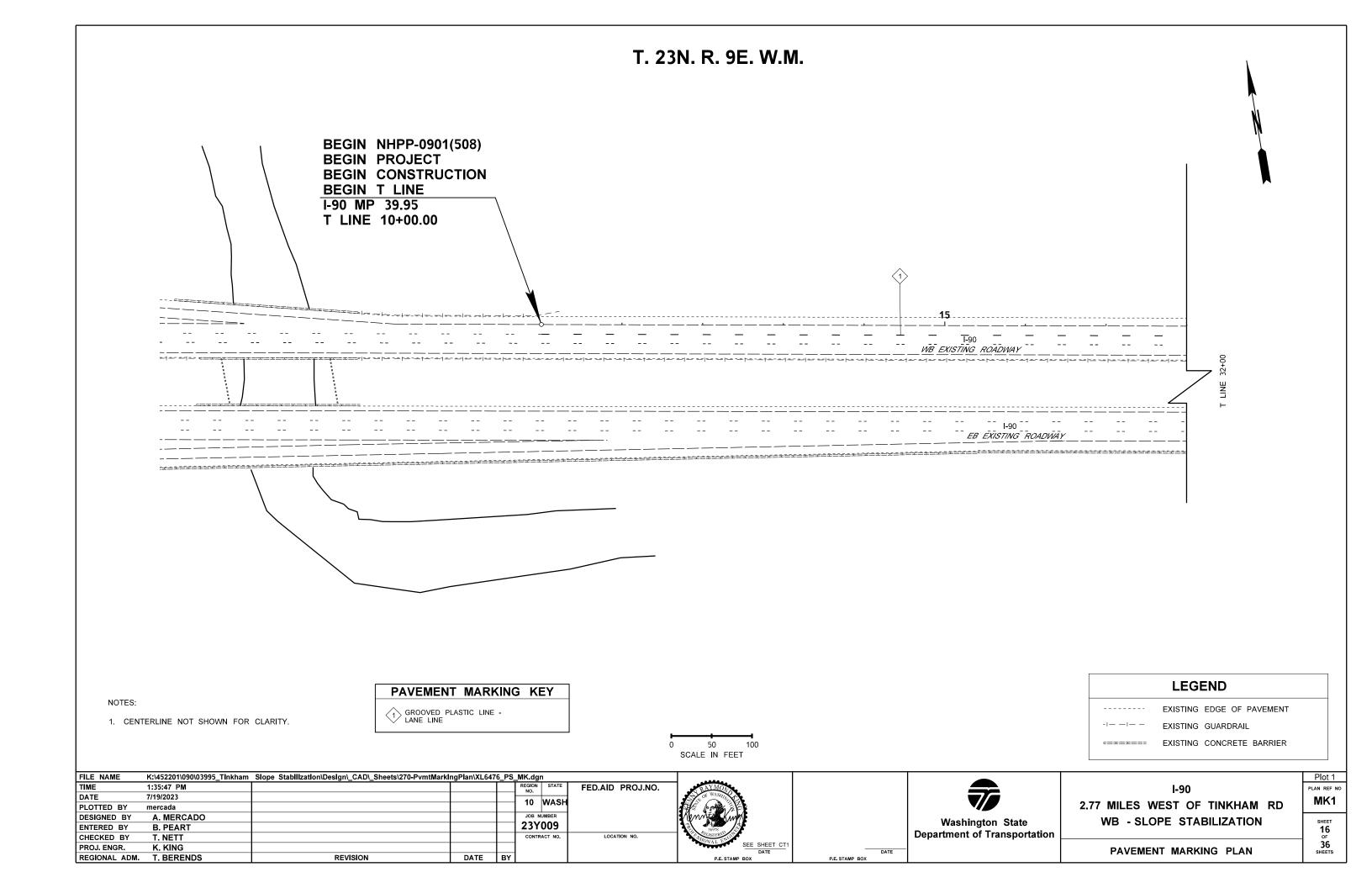


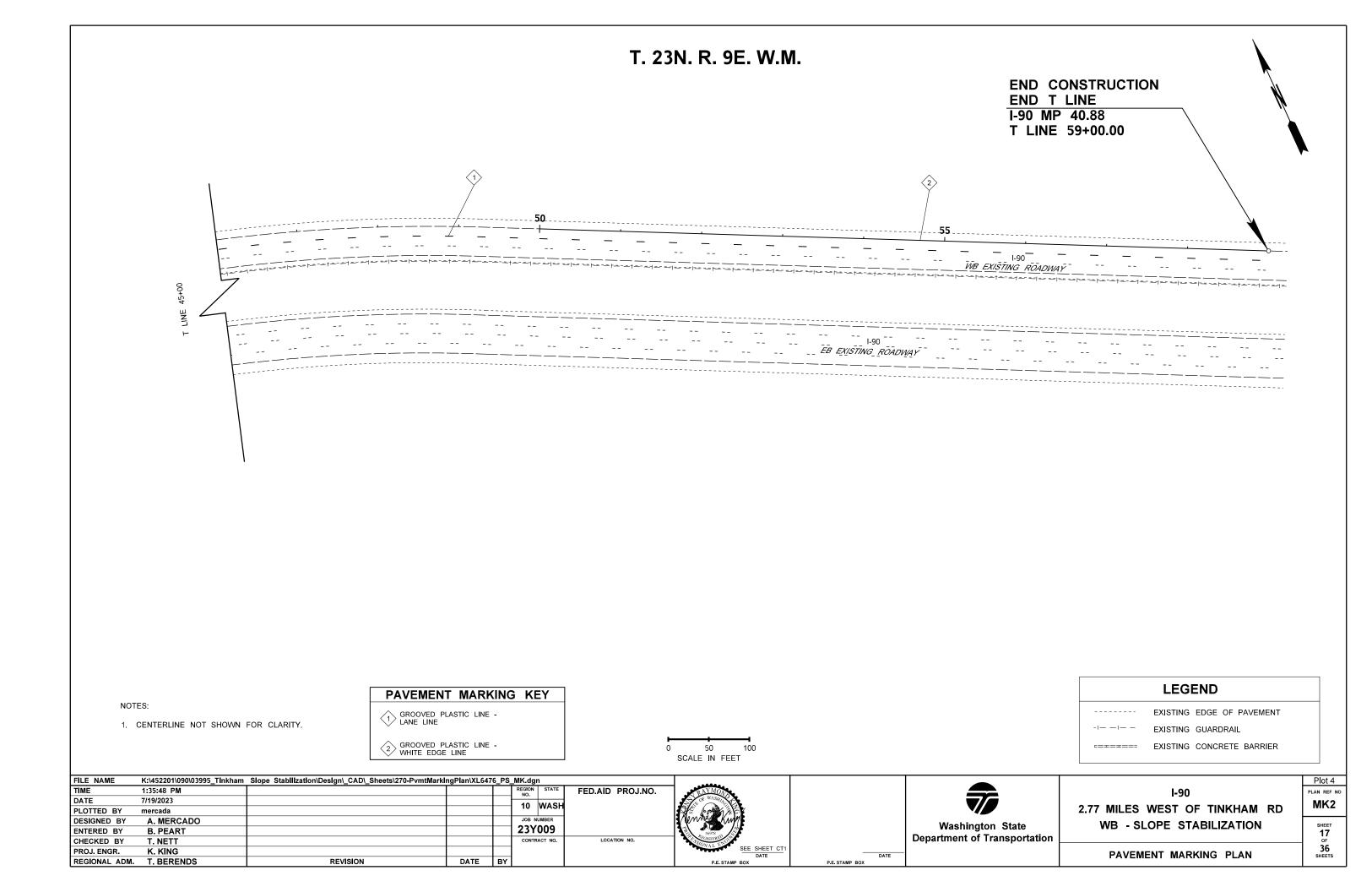
					QI	JANT	TITY T	ABUL	ATION					
REFE REFE CONS	FIRST NUMBER OF THE "CODE" BELOW ERS TO THE SHEET NO. OR THE SHEET ERENCE NO. SHOWING THE STRUCTION FEATURE. SECOND NUMBER REFERS TO THE STRUCTION FEATURE FOUND ON THAT	TEMPORARY BARRIER	TEMPORARY IMPACT ATTENUATOR	-LEXIBLE GUIDE POST		GROOVED PLASTIC LINE		TEMPORARY PAVEMENT MARKING- SHORT DURATION	CONEX ROCKFALL BARRIER			SEE GENERAL NOTES	GENERAL NOTES:	
SU1-2	T 10+00 TO T 59+00 T 11+00 (9' RT.) TO T 25+70 (0' RT.) T 11+50 (4' RT.) TO 23+50 (4' RT.) T 25+70 (0' RT.)	L.F.	TACH	EACH 6		L.F. 5800		L.F. 4900	1200			3, 4, 5	1. TEMPORARY IMPACT ATTENUATOR SHAONE OF THE FOLLOWING: ABSORB - M, A 350, ACZ-350, OR SLED AND SHALL INCLUISION W12-501. 2. TEMPORARY BARRIER SHALL BE TYPE PRECAST CONCRETE BARRIER. 3. PLASTIC LINE SHALL BE 6 INCH WIDE A MATERIAL TYPE C-1. 4. GROOVES SHALL MATCH EXISTING LOUIF PRESENT. INSTALL NEW GROOVE AT 3 DEPTH IF NOT PRESENT. 5. GUIDE POST SHALL BE SPACED AT 500 ALONG REMOVAL AREA.	BSORB DE 2 ND CATION 100 MIL
DESIGN	SHEET TOTAL PROJECT TOTAL NED BY A. MERCADO 07/10/23		1 1	6 6 REGION NO.	STATE WASH	5800 5800 FED. AID P		4900 4900	1200 1200	_		2.	I-90 77 MILES WEST OF TINKHAM RD	QT1
ENTER CHECK PROJ. REGIOI	ED BY J. ZUNIGA 07/10/23 (ED BY B. SCHILPEROORT ENGR. K. KING	RE	/ISION	JOB NU 23Y CONTRA	IMBER 009					Washin Depart	egton State Iment of Transportation		WB - SLOPE STABLIZATION QUANTITY TABULATION	SHEET 12 OF 36 SHEETS

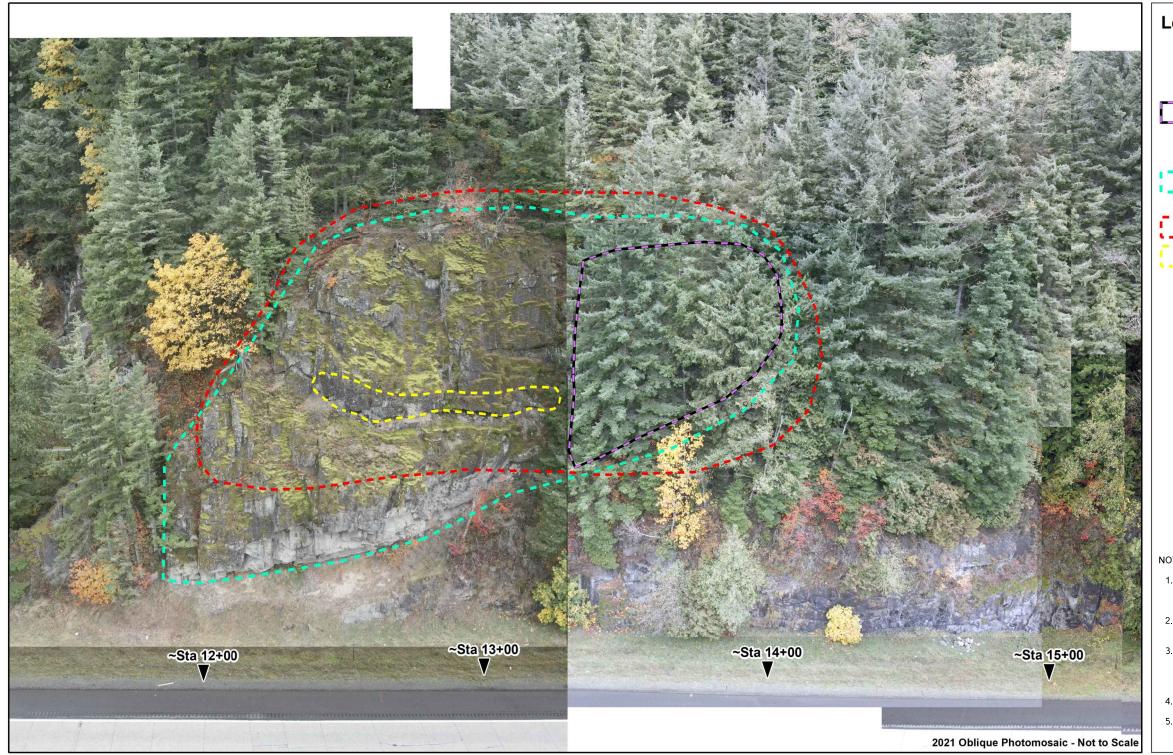












Approximate Stationing

Install approximately 50 linear feet of 50kip pattern Type 1 rock dowels (installation location obscured by vegetation).

Install approximately 175 linear feet of 25-Kip spot Type 1 Rock Dowels in the area(s) delineated on this sheet.

Approximate Slope Scaling Limits

Approximate Intensive Scaling Limits

NOTES:

- 1. SEE ROCK SLOPE SCALING PROCEDURES IN "ROCK CUTS" SUBSECTION OF SPECIAL PROVISION "ROADWAY EXCAVATION
- 2. ROCK SLOPE SCALING AREA TO BE INSPECTED WITH ENGINEER TO DETERMINE SCALING REQUIREMENTS.
- 3. FOR VEGETATION REMOVAL REQUIREMENTS, SEE SPECIAL PROVISION "SLOPE SCALING VEGETATION REMOVAL". REMOVAL LIMITS MAY EXTEND 25 FT. AHEAD AND BACK ON STATION WITHIN THE SLOPE SCALING AREA LIMITS SHOWN.
- 4. FOR TYPICAL SLOPE DIMENSIONS, SEE SHEETS RKP1 RKP5.
- 5. UPON COMPLETION OF SLOPE SCALING, INSTALLATION LOCATION OF DOWELS TO BE INSPECTED WITH ENGINEER TO DETERMINE ACTUAL LOCATION(S).

STABILIZATION SEQUENCE:

- 1. PERFORM VEGETATION REMOVAL.
- 2. ERECT ROCKFALL CONTAINMENT NET. SLOPE SCALING, AND DEBRIS REMOVAL.
- 3. INSTALL ROCK DOWELS AND HORIZONTAL DRAINS.

SLOPE SCALING & TYPE 1 ROCK DOWEL LAYOUT

VICINITY T LINE STA. 12+00 TO 15+00

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tinkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlope	eStabilization\	XL647	6_PS_F	₹K.dgn		Т
TIME	8:01:36 AM				REGION NO.	STATE	FED.AID PROJ.NO.	1
DATE	7/19/2023					WASH		J
PLOTTED BY	Rodried				10	WASH		1
DESIGNED BY	A. MERCADO					UMBER		1
ENTERED BY	E. RODRIGUEZ				23Y	009		13
CHECKED BY	T. NETT				CONTR	RACT NO.	LOCATION NO.	1
PROJ. ENGR.	K. KING							
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY				

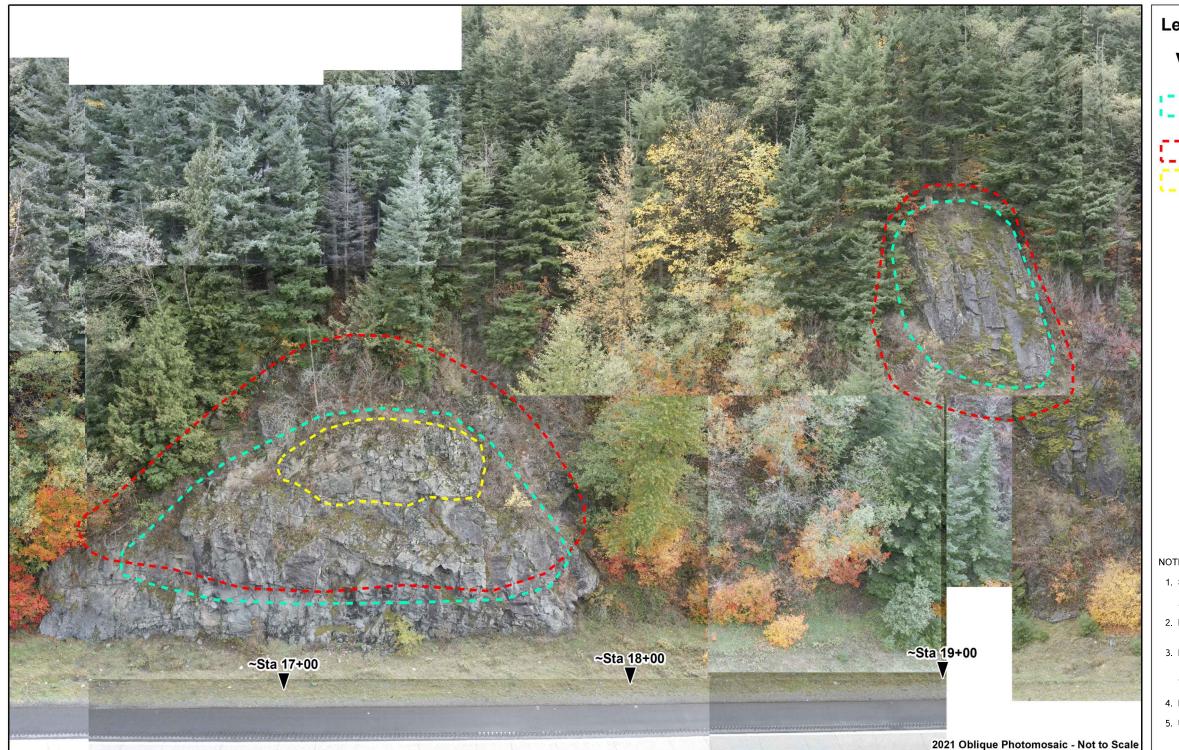




I-90 2.77 MILES WEST OF TINKHAM RD **WB - SLOPE STABILIZATION**

ROCK SLOPE DETAILS

RKD1 18 36 SHEETS



Approximate Stationing



Install approximately 450 linear feet of 25-Kip spot Type 1 Rock Dowels in the area(s) delineated on this sheet.



Approximate Slope Scaling Limits

Approximate Intensive Scaling Limits

NOTES:

- 1. SEE ROCK SLOPE SCALING PROCEDURES IN "ROCK CUTS" SUBSECTION OF SPECIAL PROVISION "ROADWAY EXCAVATION AND EMBANKMENT."
- 2. ROCK SLOPE SCALING AREA TO BE INSPECTED WITH ENGINEER TO DETERMINE SCALING REQUIREMENTS.
- 3. FOR VEGETATION REMOVAL REQUIREMENTS, SEE SPECIAL PROVISION "SLOPE SCALING VEGETATION REMOVAL". REMOVAL LIMITS MAY EXTEND 25 FT. AHEAD AND BACK ON STATION WITHIN THE SLOPE SCALING AREA LIMITS SHOWN.
- 4. FOR TYPICAL SLOPE DIMENSIONS, SEE SHEETS RKP1 RKP5.
- 5. UPON COMPLETION OF SLOPE SCALING, INSTALLATION LOCATION OF DOWELS TO BE INSPECTED WITH ENGINEER TO DETERMINE ACTUAL LOCATION(S).

STABILIZATION SEQUENCE:

- 1. PERFORM VEGETATION REMOVAL.
- 2. ERECT ROCKFALL CONTAINMENT NET. SLOPE SCALING, AND DEBRIS REMOVAL.
- 3. INSTALL ROCK DOWELS AND HORIZONTAL DRAINS.

SLOPE SCALING & TYPE 1 ROCK DOWEL LAYOUT

VICINITY T LINE STA. 16+50 TO 19+50

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tinkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlope	Stabilization\)	(L647	6_PS_F	₹K.dgn	
TIME	8:01:38 AM				REGION NO.	STATE	FED.AID PROJ.NO.
DATE	7/19/2023				10	WASH	
PLOTTED BY	Rodried				יי ן	WASH	
DESIGNED BY	A. MERCADO					IUMBER	
ENTERED BY	E. RODRIGUEZ				23Y	009	
CHECKED BY	T. NETT				CONTI	RACT NO.	LOCATION NO.
PROJ. ENGR.	K. KING						
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY			



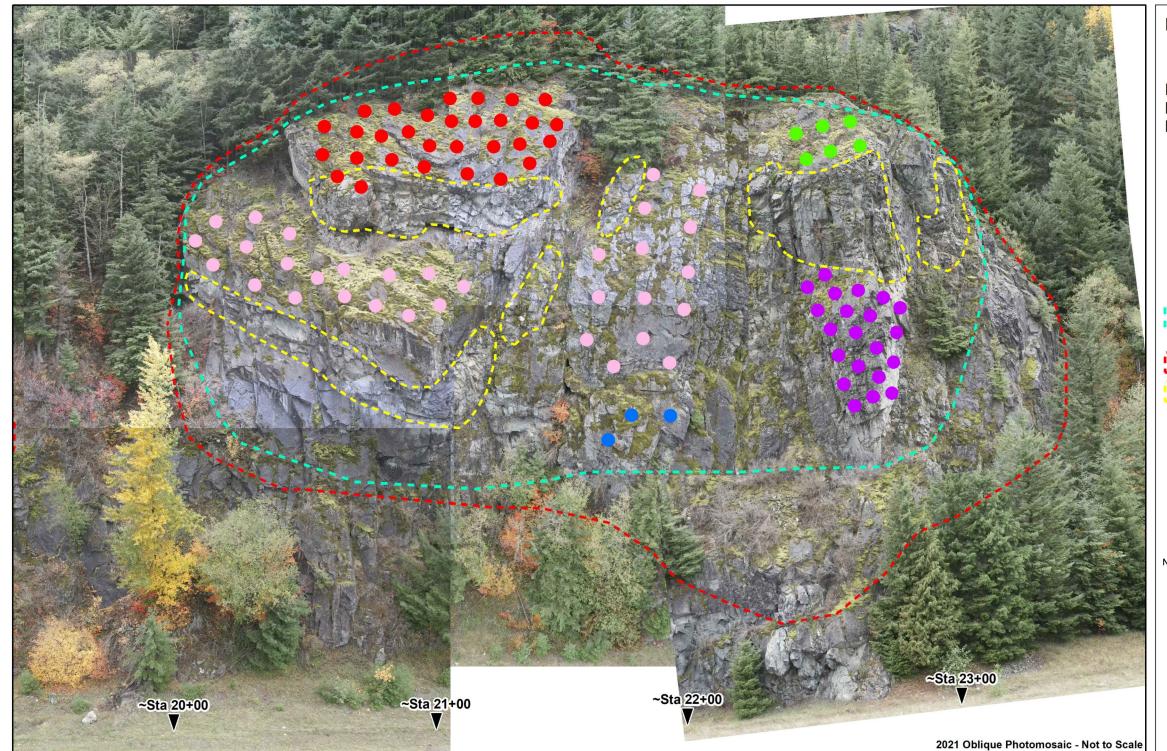


I-90								
2.77 MILES WEST OF TINKHAM	RD							
WB - SLOPE STABILIZATION								

ROCK SLOPE DETAILS

Plot 2 PLAN REF NO RKD2 19

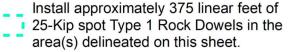
36 SHEETS



▼ Approximate Stationing

Design loads, approximate installation locations, and approximate minimum lengths of pattern Type 1 Rock Dowels

- 25-ft.-long, 50-Kip Type 1 Rock Dowel
- 30-ft.-long, 75-Kip Type 1 Rock Dowel
- 25-ft.-long, 100-Kip Type 1 Rock Dowel
- 30-ft.-long, 100-Kip Type 1 Rock Dowel
- 35-ft.-long, 100-Kip Type 1 Rock Dowel





Approximate Intensive Scaling Limits

NOTES:

- 1. SEE ROCK SLOPE SCALING PROCEDURES IN "ROCK CUTS" SUBSECTION OF SPECIAL PROVISION "ROADWAY EXCAVATION
- 2. ROCK SLOPE SCALING AREA TO BE INSPECTED WITH ENGINEER TO DETERMINE SCALING REQUIREMENTS.
- 3. FOR VEGETATION REMOVAL REQUIREMENTS, SEE SPECIAL PROVISION "SLOPE SCALING VEGETATION REMOVAL". REMOVAL LIMITS MAY EXTEND 25 FT. AHEAD AND BACK ON STATION WITHIN THE SLOPE SCALING AREA LIMITS SHOWN.
- 4. FOR TYPICAL SLOPE DIMENSIONS, SEE SHEETS RKP1 RKP5.
- 5. UPON COMPLETION OF SLOPE SCALING, INSTALLATION LOCATION OF DOWELS TO BE INSPECTED WITH ENGINEER TO DETERMINE ACTUAL LOCATION(S).

STABILIZATION SEQUENCE:

- 1. PERFORM VEGETATION REMOVAL.
- 2. ERECT ROCKFALL CONTAINMENT NET. SLOPE SCALING, AND DEBRIS REMOVAL.
- 3. INSTALL ROCK DOWELS AND HORIZONTAL DRAINS.

SLOPE SCALING & TYPE 1 ROCK DOWEL LAYOUT

VICINITY T LINE STA. 20+00 TO 23+50

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tlnkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlope	Stabilization\	XL647	6_PS_R	RK.dgn		
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DATE	7/19/2023					WASH		1
PLOTTED BY	Rodried				10	WASH		137
DESIGNED BY	A. MERCADO					IUMBER		
ENTERED BY	E. RODRIGUEZ				23Y	009		13
CHECKED BY	T. NETT				CONTR	RACT NO.	LOCATION NO.	٦ ٦
PROJ. ENGR.	K. KING							
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY				

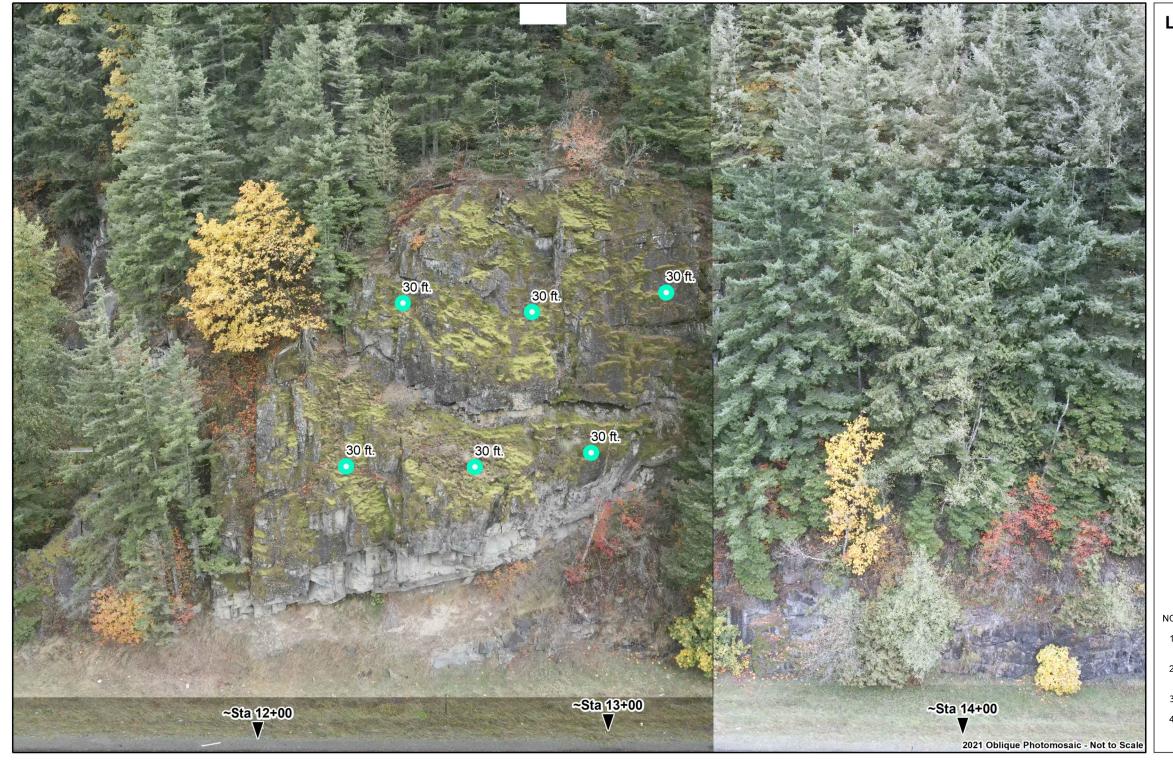




I-90 2.77 MILES WEST OF TINKHAM RD WB - SLOPE STABILIZATION

ROCK SLOPE DETAILS

SHEET 20 OF 36 SHEETS



- Approximate Stationing
- Horizontal Drain Uncased in Rock
 (Approximate inclination +5°; location and length approximate)

IOTES:

- 1. SEE SPECIAL PROVISION "HORIZONTAL DRAINS UNCASED IN ROCK" FOR ADDITIONAL DETAILS.
- 2. FOR SLOPE SCALING AND ROCK DOWEL LAYOUT, SEE SHEETS RKD1 RKD3.
- 3. FOR TYPICAL SLOPE DIMENSIONS, SEE SHEETS RKP1 RKP5.
- 4. UPON COMPLETION OF SLOPE SCALING, INSTALLATION LOCATION OF HORIZONTAL DRAIN TO BE INSPECTED WITH ENGINEER TO DETERMINE ACTUAL LOCATION(S).

HORIZONTAL DRAIN LAYOUT

VICINITY T LINE STA. 12+00 TO 15+00

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tinkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlope	Stabilization\)	XL647	6_PS_F	RK.dgn		
TIME	8:01:42 AM				REGION NO.	STATE	FED.AID PROJ.NO.	
DATE	7/19/2023					WASH		Ι,
PLOTTED BY	Rodried				10	WASH		13
DESIGNED BY	A. MERCADO					NUMBER		11
ENTERED BY	E. RODRIGUEZ				23Y	009		62
CHECKED BY	T. NETT				CONTR	RACT NO.	LOCATION NO.	
PROJ. ENGR.	K. KING							
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY				

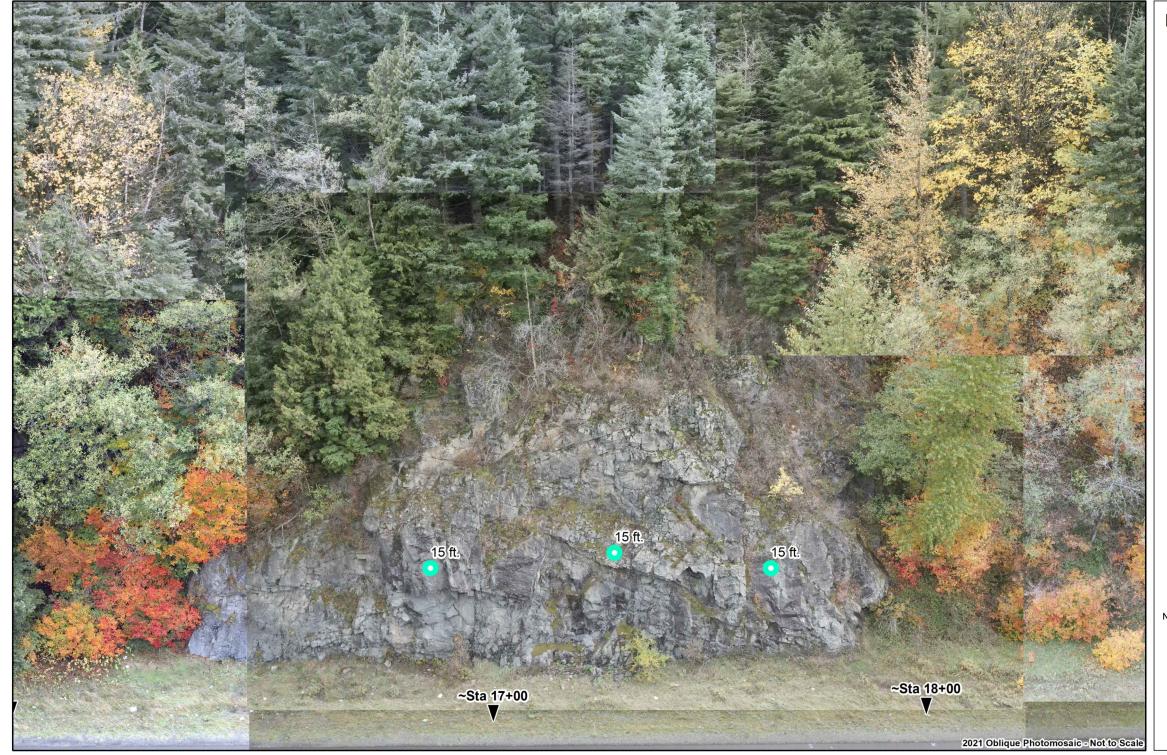




I-90	
2.77 MILES WEST OF TINKHAM	RD
WB - SLOPE STABILIZATION	

HORIZONTAL DRAIN LAYOUT

SHEET
21
OF
36
SHEETS



- ▼ Approximate Stationing
- Horizontal Drain Uncased in Rock
 (Approximate inclination +5°; location and length approximate)

NOTES:

- 1. SEE SPECIAL PROVISION "HORIZONTAL DRAINS UNCASED IN ROCK" FOR ADDITIONAL DETAILS.
- 2. FOR SLOPE SCALING AND ROCK DOWEL LAYOUT, SEE SHEETS RKD1 RKD3.
- 3. FOR TYPICAL SLOPE DIMENSIONS, SEE SHEETS RKP1 RKP5.
- 4. UPON COMPLETION OF SLOPE SCALING, INSTALLATION LOCATION OF HORIZONTAL DRAIN TO BE INSPECTED WITH ENGINEER TO DETERMINE ACTUAL LOCATION(S).

HORIZONTAL DRAIN LAYOUT

VICINITY T LINE STA. 16+50 TO 19+50

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tinkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlope	Stabilization\	XL647	6_PS_R	≀K.dgn		
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DATE	7/19/2023					WASH		
PLOTTED BY	Rodried				10	WASH		1
DESIGNED BY	A. MERCADO					IUMBER		116
ENTERED BY	E. RODRIGUEZ				23Y	009		13
CHECKED BY	T. NETT				CONTR	RACT NO.	LOCATION NO.	ر [
PROJ. ENGR.	K. KING							
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY				





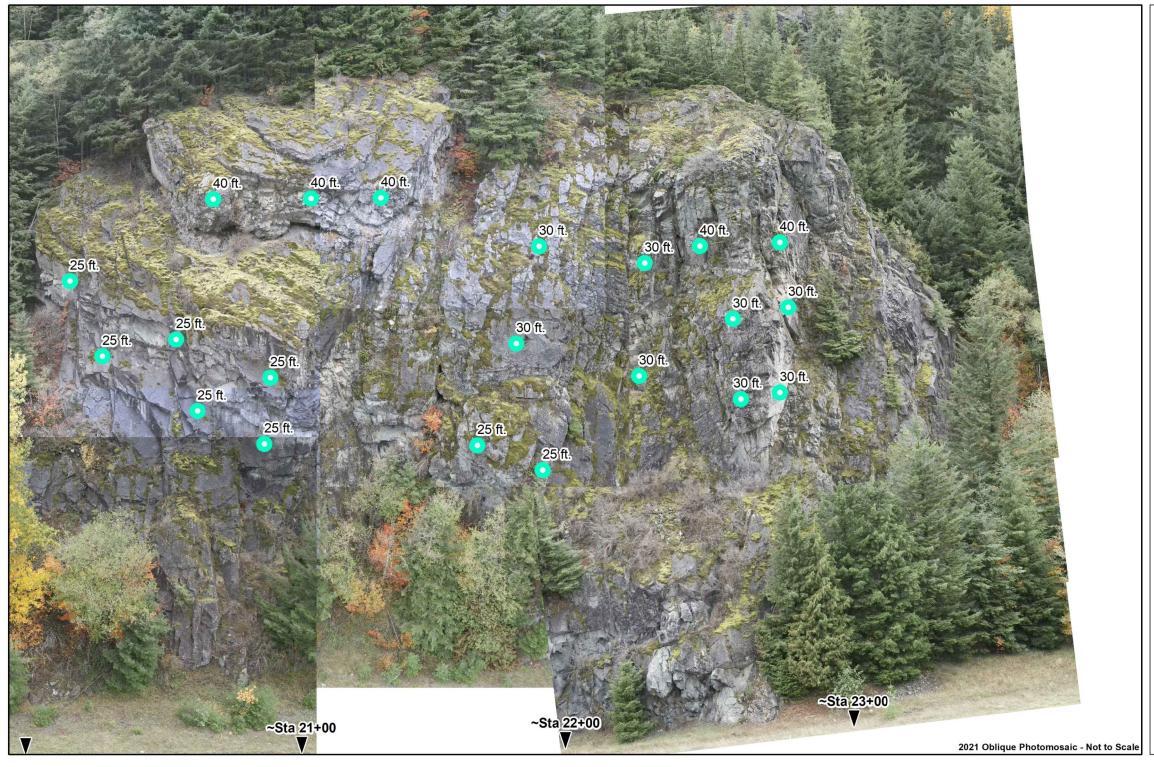
I-90	
2.77 MILES WEST OF TINKHAM	RD
WB - SLOPE STABILIZATION	

HORIZONTAL DRAIN LAYOUT

SHEET
22
OF
36
SHEETS

Plot 5

RKD5



▼ Approximate Stationing

Horizontal Drain - Uncased in Rock
(Approximate inclination +5°; location and length approximate)

NOTES:

- 1. SEE SPECIAL PROVISION "HORIZONTAL DRAINS UNCASED IN ROCK" FOR ADDITIONAL DETAILS.
- 2. FOR SLOPE SCALING AND ROCK DOWEL LAYOUT, SEE SHEETS RKD1 RKD3.
- 3. FOR TYPICAL SLOPE DIMENSIONS, SEE SHEETS RKP1 RKP5.
- 4. UPON COMPLETION OF SLOPE SCALING, INSTALLATION LOCATION OF HORIZONTAL DRAIN TO BE INSPECTED WITH ENGINEER TO DETERMINE ACTUAL LOCATION(S).

HORIZONTAL DRAIN LAYOUT

VICINITY T LINE STA. 20+00 TO 23+50

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tlnkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlope	Stabilization\)	(L647	6_PS_R	K.dgn	
TIME	8:01:46 AM				REGION NO.	STATE	FED.AID PROJ.NO.
DATE	7/19/2023					WASH	
PLOTTED BY	Rodried				''	WASH	
DESIGNED BY	A. MERCADO				JOB N		
ENTERED BY	E. RODRIGUEZ				23Y	009	
CHECKED BY	T. NETT				CONTR	ACT NO.	LOCATION NO.
PROJ. ENGR.	K. KING						
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY			



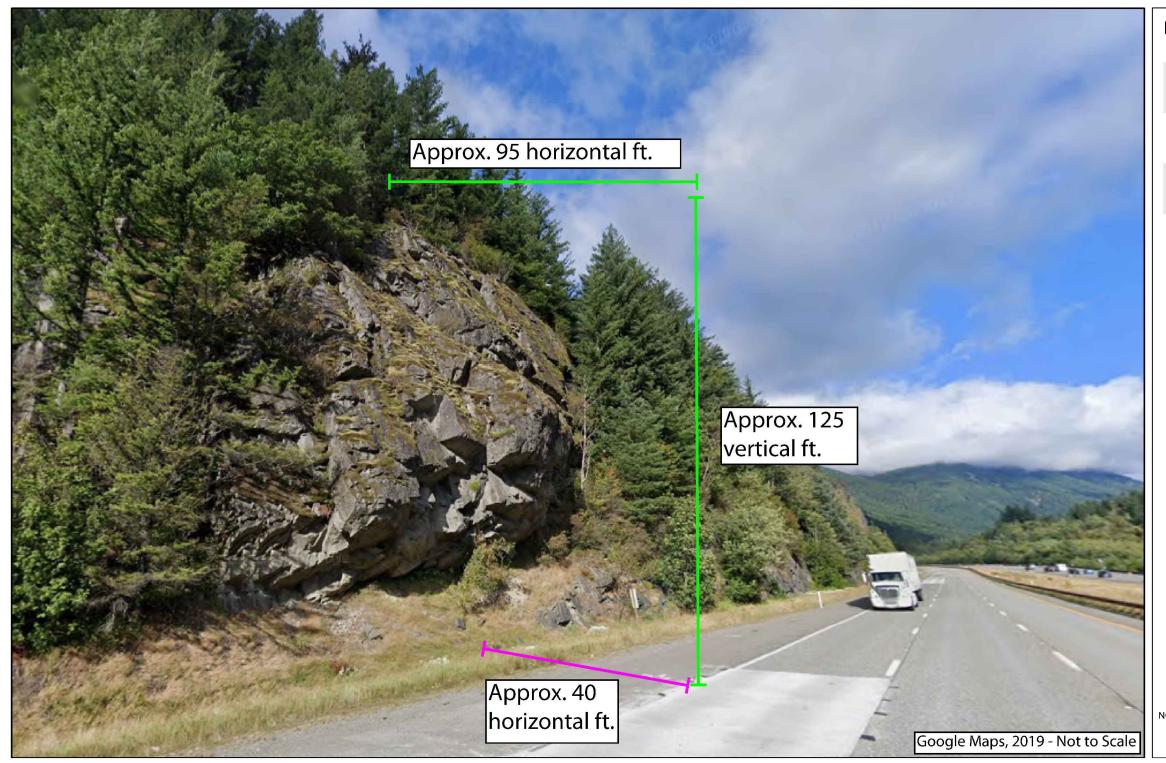


I-90	
2.77 MILES WEST OF TINKHAM	RD
WB - SLOPE STABILIZATION	

HORIZONTAL DRAIN LAYOUT

RKD6

SHEET
23
OF
36
SHEETS



ш

Approximate vertical and horizontal distances from brow of slope to WB I-90 fogline, vicinity ~Sta 12+80



Approximate horizontal distance from WB I-90 fogline to back of ditch, vicinity ~Sta 12+80

NOTE:

1. FOR SLOPE SCALING, ROCK DOWEL AND HORIZONTAL DRAIN LAYOUT, SEE SHEETS RKD1 - RKD6.

SLOPE DIMENSIONS

VICINITY T LINE STA. 12+00 TO 15+00

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tlnkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlope	Stabilization\	XL647	6_PS_R	K.dgn		
TIME	8:01:48 AM				REGION NO.	STATE	FED.AID PROJ.NO.	٦.,
DATE	7/19/2023					WASH		
PLOTTED BY	Rodried				10	WASH		1
DESIGNED BY	A. MERCADO					UMBER		
ENTERED BY	E. RODRIGUEZ				23Y	009		130
CHECKED BY	T. NETT				CONTR	ACT NO.	LOCATION NO.	7
PROJ. ENGR.	K. KING							
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY				



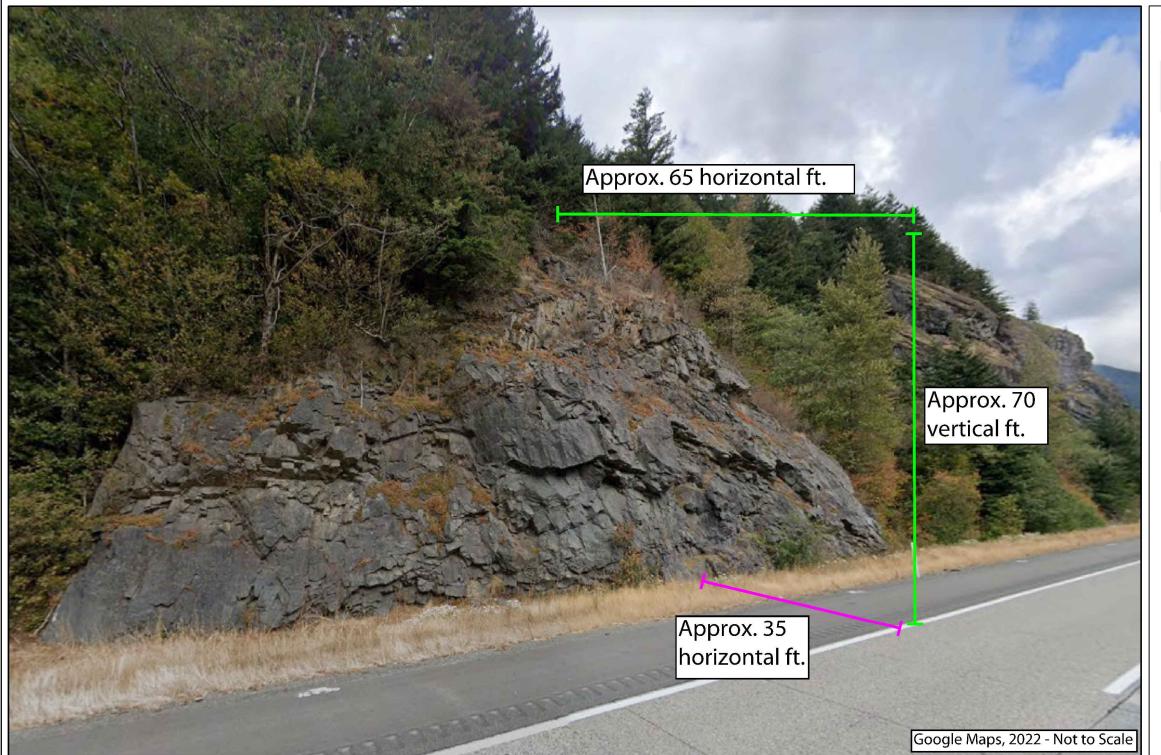


I-90	
2.77 MILES WEST OF TINKHAM	RD
WB - SLOPE STABILIZATION	

ROCK SLOPE PROFILE

PLAN REF NO
RKP1

SHEET
24
OF
36
SHEETS





Approximate vertical and horizontal distances from brow of slope to WB I-90 fogline, vicinity ~Sta 17+10



Approximate horizontal distance from WB I-90 fogline to back of ditch, vicinity ~Sta 17+10

1. FOR SLOPE SCALING, ROCK DOWEL AND HORIZONTAL DRAIN LAYOUT, SEE SHEETS RKD1 - RKD6.

SLOPE DIMENSIONS

VICINITY T LINE STA. 16+50 TO 19+50

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tinkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlope	Stabilization\	XL647	6_PS_R	K.dgn		
TIME	8:01:50 AM				REGION NO.	STATE	FED.AID PROJ.NO.	معود ا
DATE	7/19/2023					WASH		
PLOTTED BY	Rodried				10	WASH		(en
DESIGNED BY	A. MERCADO				JOB N			Klen
ENTERED BY	E. RODRIGUEZ				23Y	009		138
CHECKED BY	T. NETT				CONTR	ACT NO.	LOCATION NO.	7
PROJ. ENGR.	K. KING							→
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY				

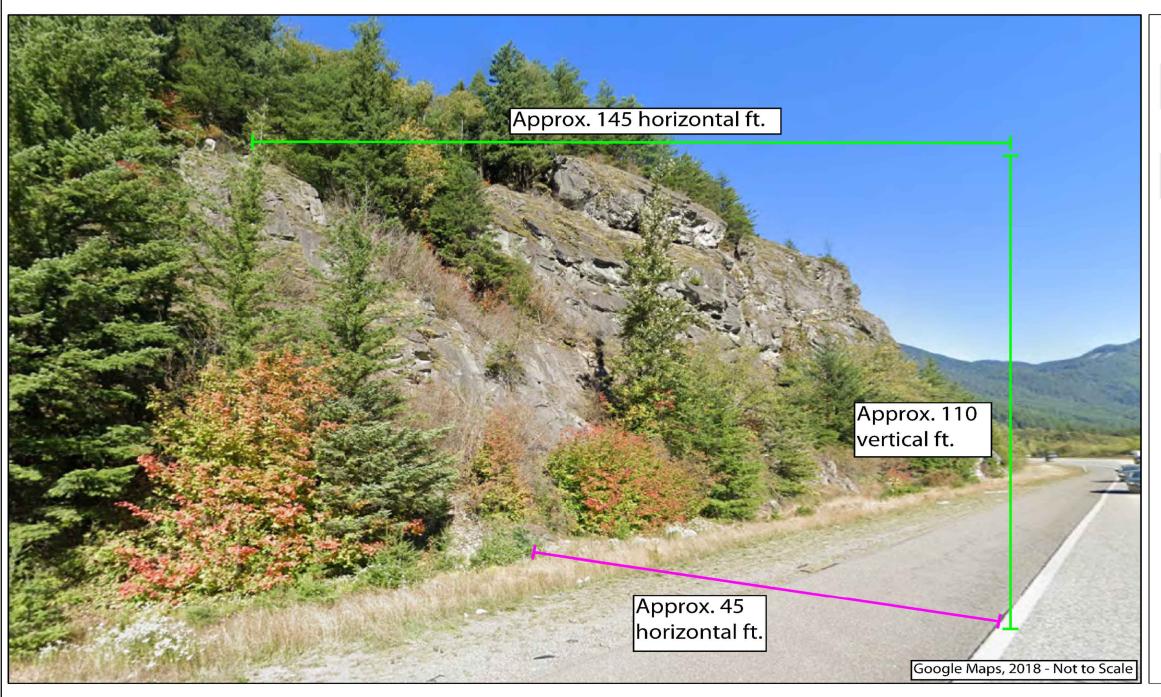




I-90	
2.77 MILES WEST OF TINKHAM	RD
WB - SLOPE STABILIZATION	

ROCK SLOPE PROFILE

RKP2 25 OF 36 SHEETS



Approximate vertical and horizontal distances from brow of slope to WB I-90 fogline, vicinity ~Sta 19+00



Approximate horizontal distance from WB I-90 fogline to back of ditch, vicinity ~Sta 19+00

NOTE

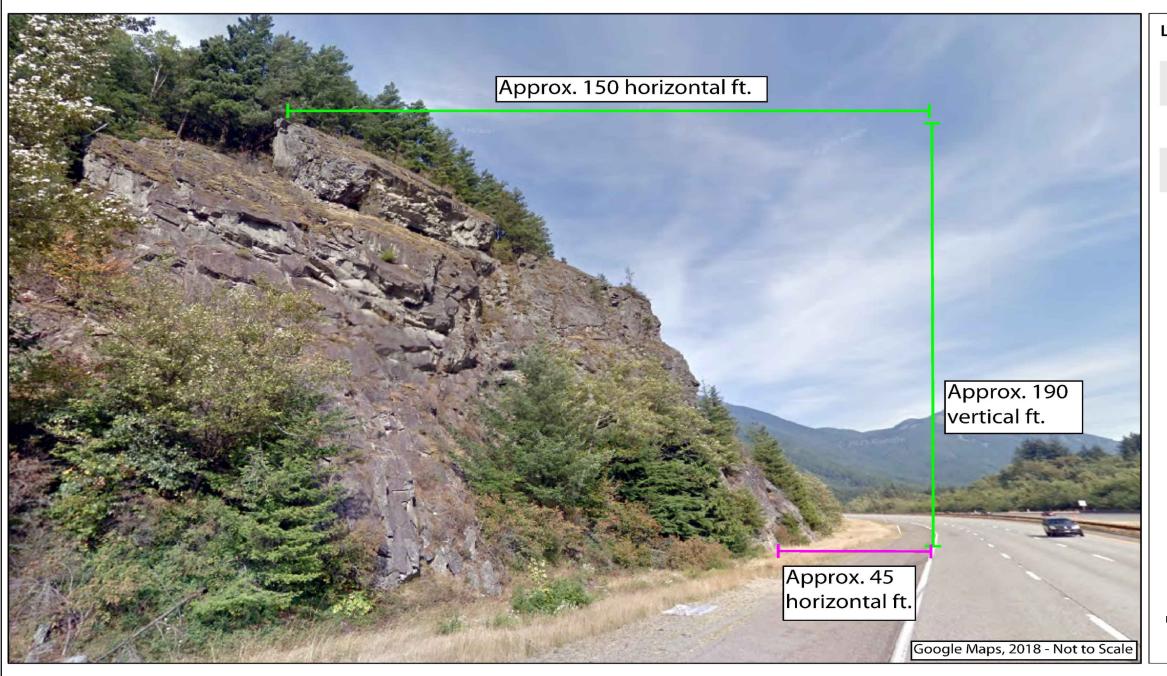
1. FOR SLOPE SCALING, ROCK DOWEL AND HORIZONTAL DRAIN LAYOUT, SEE SHEETS RKD1 - RKD6.

SLOPE DIMENSIONS

VICINITY T LINE STA. 16+50 TO 19+50

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tinkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlop	peStabIIIzation\	\XL6476_F	PS_RK.dgn						Plot 12
TIME	8:01:52 AM			RE	EGION STATE	FED.AID PROJ.NO.	RAYMON			l-90	PLAN REF NO
DATE	7/19/2023				10 WASH		Sign WASHING				RKP3
PLOTTED BY	Rodried				10 WASH		196 60 20 /			2.77 MILES WEST OF TINKHAM RD	''''
DESIGNED BY	A. MERCADO				JOB NUMBER		Kenickhild		Washington State	WB - SLOPE STABILIZATION	SHEET
ENTERED BY	E. RODRIGUEZ			2	23Y009		5697		J		26
CHECKED BY	T. NETT				CONTRACT NO.	LOCATION NO.	SSIONAL ENGINEERS		Department of Transportation		OF OF
PROJ. ENGR.	K. KING						SEE SHEET CT1	DATE		ROCK SLOPE PROFILE	36 SHEETS
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY			P.E. STAMP BOX	P.E. STAMP BOX		1	SITEETS



1

Approximate vertical and horizontal distances from brow of slope to WB I-90 fogline, vicinity ~Sta 20+90



Approximate horizontal distance from WB I-90 fogline to back of ditch, vicinity ~Sta 20+90

NOTES

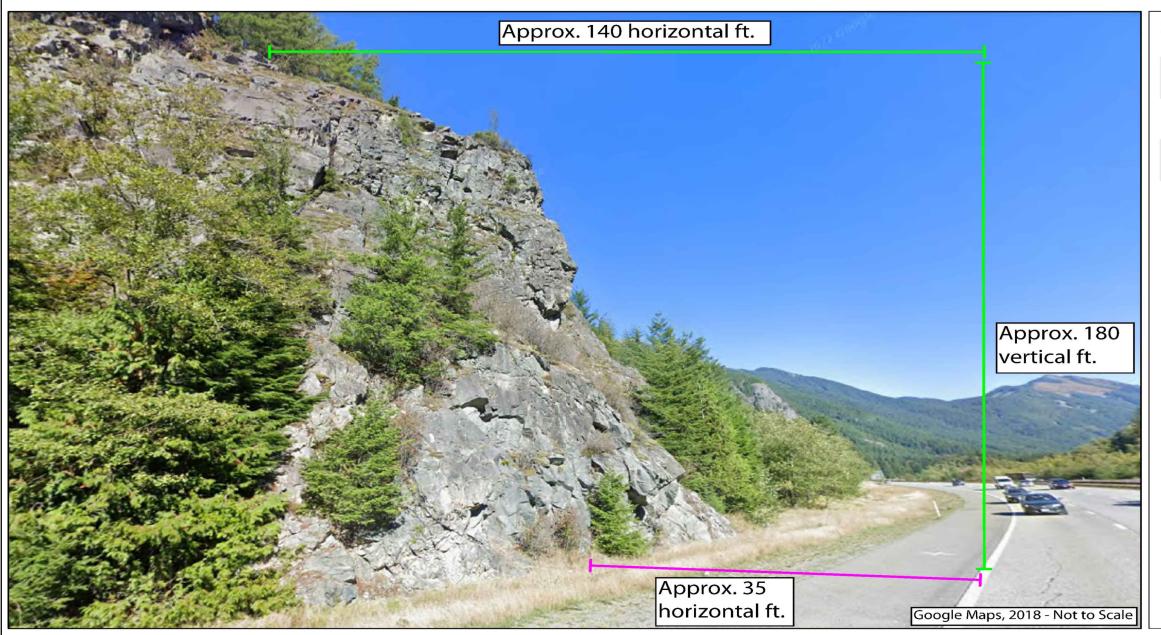
1. FOR SLOPE SCALING, ROCK DOWEL AND HORIZONTAL DRAIN LAYOUT, SEE SHEETS RKD1 - RKD6.

SLOPE DIMENSIONS

VICINITY T LINE STA. 20+00 TO 23+50

NOT TO SCALE

FILE NAME	K:\452201\090\03995_TInkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlop	eStabIIIzation\	XL6476_	_PS_RK.dgn						Plot 13
TIME	8:01:54 AM			F	REGION STATE	FED.AID PROJ.NO.	RAYMON			l-90	PLAN REF NO
DATE	7/19/2023				10 WASH	1	Sign of Washing				RKP4
PLOTTED BY	Rodried				IU WASH	1				2.77 MILES WEST OF TINKHAM RD	'''' 7
DESIGNED BY	A. MERCADO				JOB NUMBER	1	1 Kenna Kakan		Washington State	WB - SLOPE STABILIZATION	SHEET
ENTERED BY	E. RODRIGUEZ				23Y009		5697		3		27
CHECKED BY	T. NETT				CONTRACT NO.	LOCATION NO.	SSIONAL ENGINE		Department of Transportation		OF
PROJ. ENGR.	K. KING						SEE SHEET CT1	DATE	-	ROCK SLOPE PROFILE	36 SHEETS
REGIONAL ADM	T BERENDS	REVISION	DATE	BY			DE STAMP POY	DE STAMP DOY			SHEETS



Approximate vertical and horizontal distances from brow of slope to WB I-90 fogline, vicinity ~Sta 22+10



Approximate horizontal distance from WB I-90 fogline to back of ditch, vicinity ~Sta 22+10

NOTE

1. FOR SLOPE SCALING, ROCK DOWEL AND HORIZONTAL DRAIN LAYOUT, SEE SHEETS RKD1 - RKD6.

SLOPE DIMENSIONS

VICINITY T LINE STA. 20+00 TO 23+50

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tinkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlope	Stabilization\	XL647	6_PS_R	√. dgn	
TIME	8:01:55 AM				REGION NO.	STATE	FED.AID PROJ.NO.
DATE	7/19/2023					WASH	
PLOTTED BY	Rodried				ן יי ן	WASH	,
DESIGNED BY	A. MERCADO				JOB NU		
ENTERED BY	E. RODRIGUEZ				23Y0	009	
CHECKED BY	T. NETT				CONTRA	CT NO.	LOCATION NO.
PROJ. ENGR.	K. KING				1		
REGIONAL ADM	T RERENDS	REVISION	DATE	RY	1		





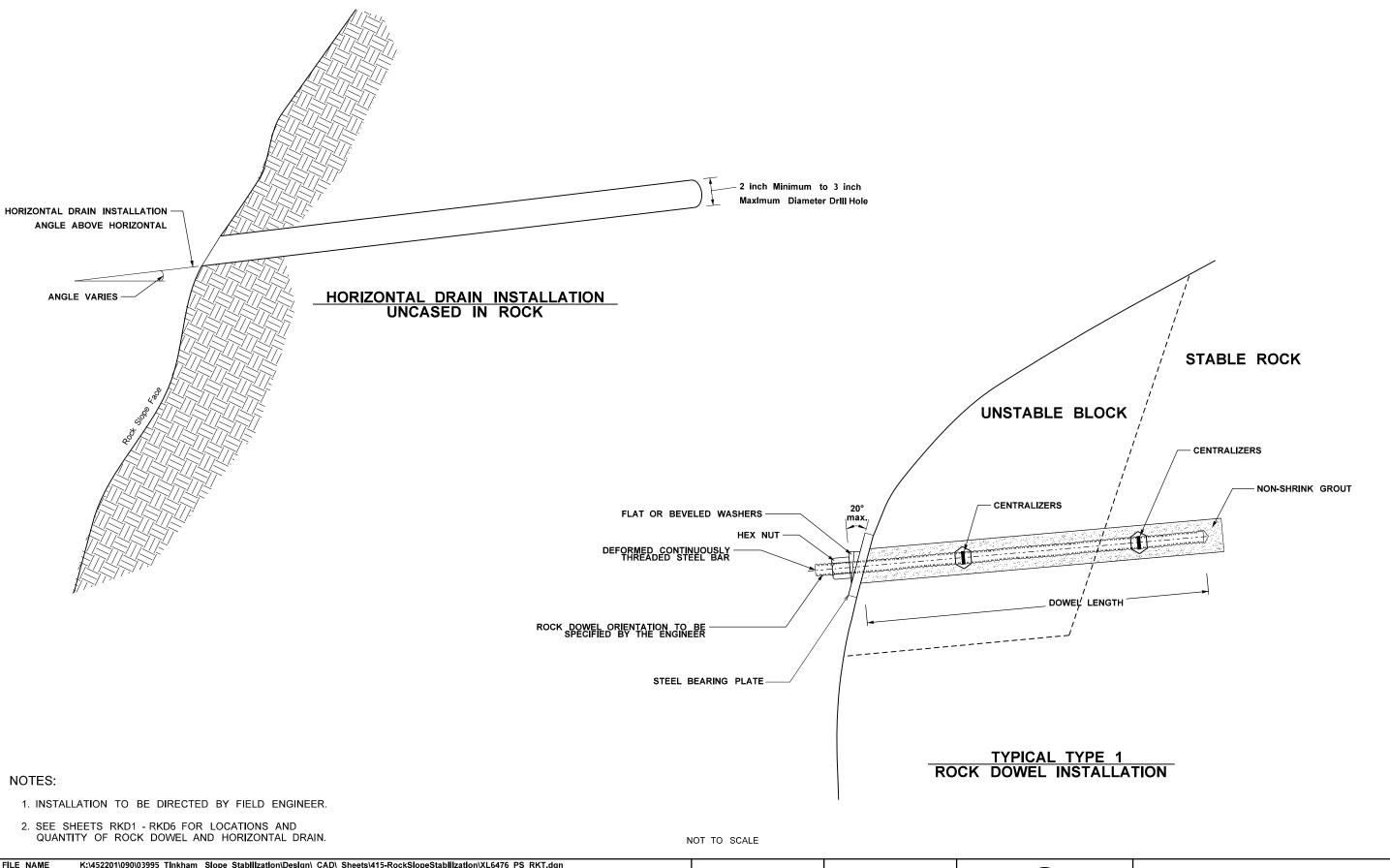
I-90 2.77 MILES WEST OF TINKHAM RD WB - SLOPE STABILIZATION

ROCK SLOPE PROFILE

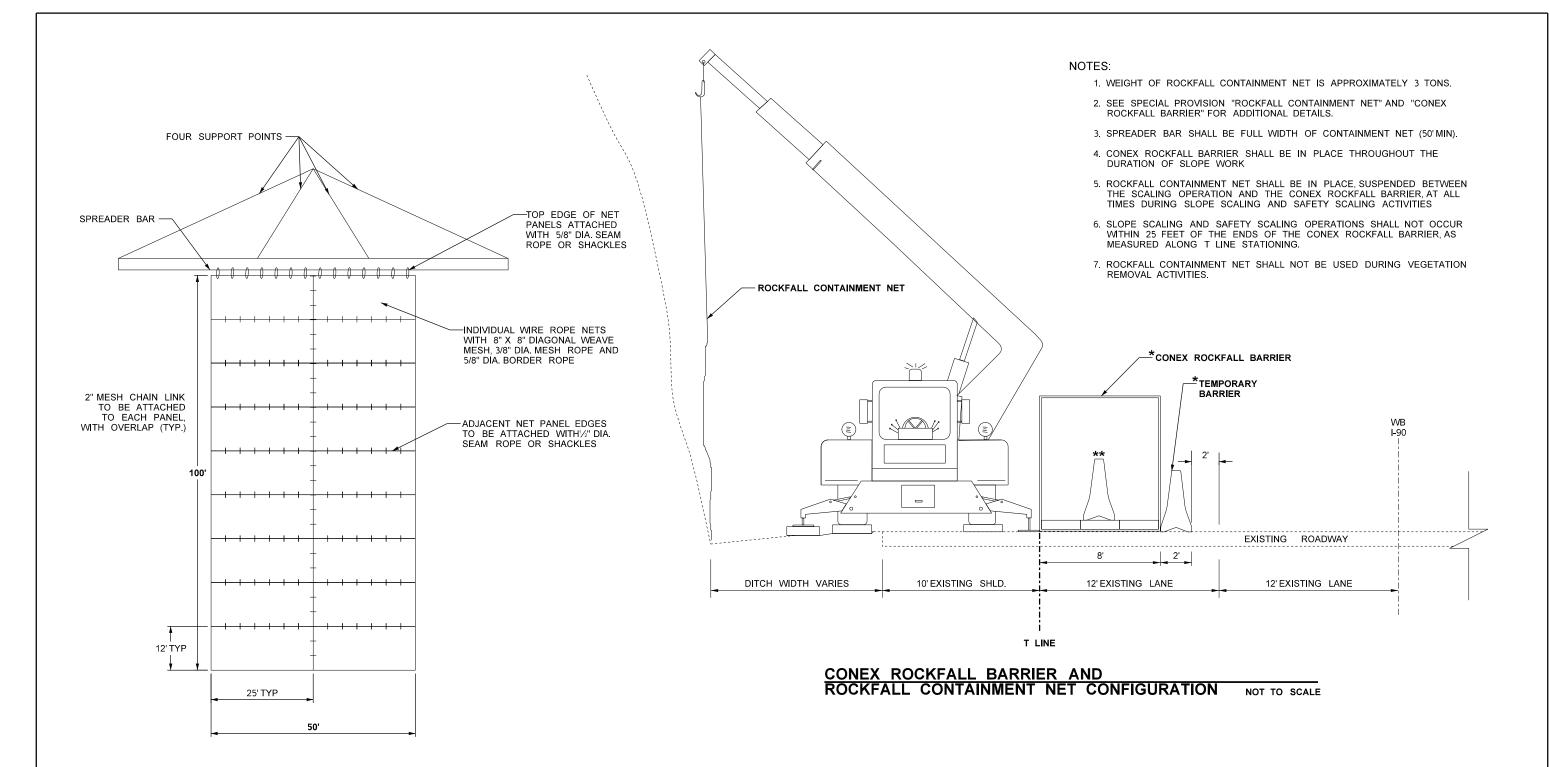
28 of 36 sheets

Plot 14

RKP5



FILE NAME	K.14322011030103333_Tillkhalli Slope Stabilization(Des	igni_CADi_Sheetsi415-RockSlopeStab	abilization/AL	04/0_F3_KN	. i .agii					PIOLI
TIME	7:36:39 AM			REGION NO.	FED.AID PROJ.NO.	RAYMON			I-90	PLAN REF NO
DATE	7/19/2023			10 14	VASH	Se of Washing				RKT1
PLOTTED BY	Rodried			10 10	VASH				2.77 MILES WEST OF TINKHAM RD	
DESIGNED BY	A. MERCADO			JOB NUM		1 lense have		Washington State	WB - SLOPE STABILIZATION	SHEET
ENTERED BY	E.RODRIGUEZ			23Y0	09	569780		3	WB - SEOLE STABILIZATION	29
CHECKED BY	T. NETT			CONTRAC	T NO. LOCATION NO.	SSONAL EXC		Department of Transportation		OF OF
PROJ. ENGR.	K. KING					SEE SHEET CT1	DATE		ROCK SLOPE STABILIZATION TYPICAL	36 SHEETS
REGIONAL ADM	. T. BERENDS	REVISION	DATE E	BY I		P.E. STAMP BOX	P.E. STAMP BOX			0.122.10

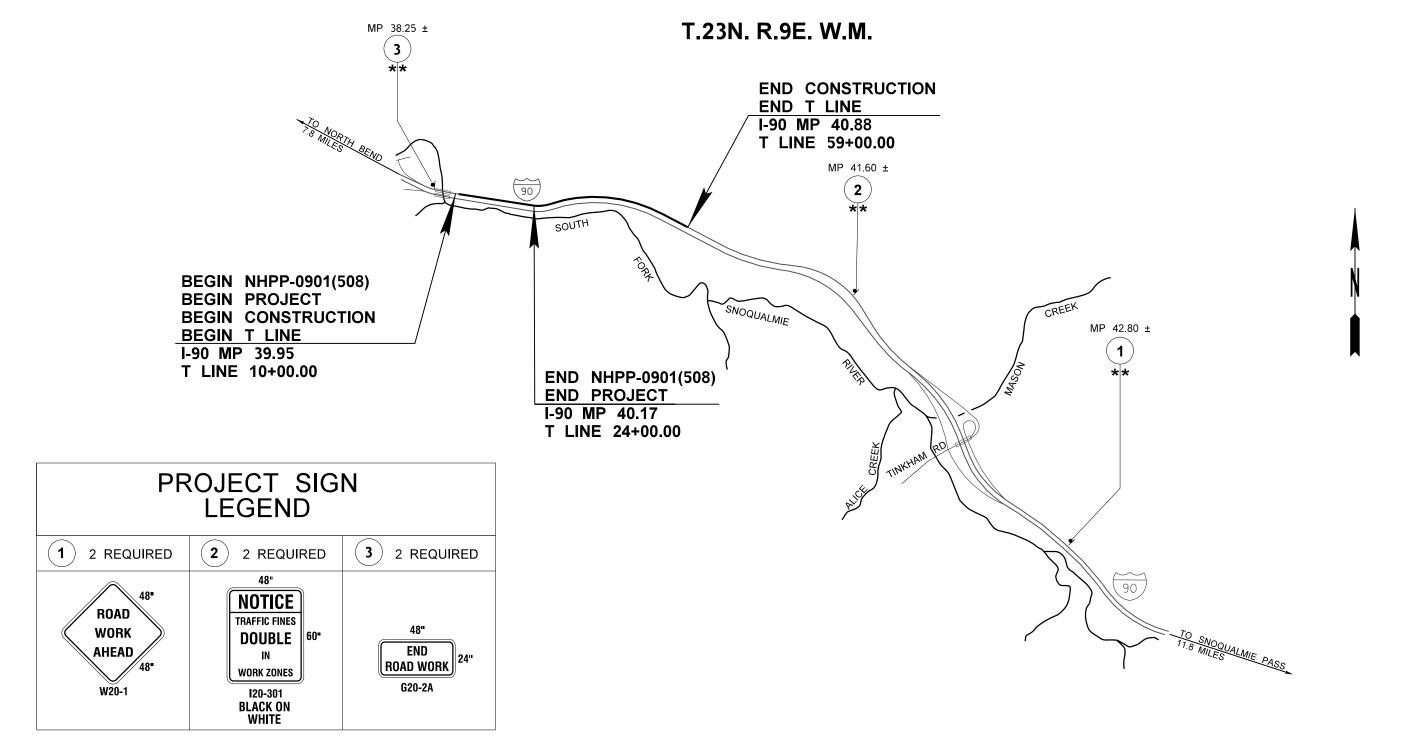


ROCKFALL CONTAINMENT NET PANELS

NOT TO SCALE

- * SEE ROADWAY STAGING SHEETS SU1 SU3 FOR ACTUAL LOCATIONS OF CONEX AND TEMPORARY BARRIER.
- ** CONEX ROCKFALL BARRIER SHALL INCLUDE 3 12.5 L.F. SECTIONS OF CONCRETE BARRIER OR OTHER MATERIAL THAT WILL PROVIDE 6 TONS OF WEIGHT PLACED INSIDE EACH CONEX CONTAINER.

FILE NAME	K:\452201\090\03995_TInkham	Slope Stabilization\Design_CAD_Sheets\415-RockSlope	Stabilization\	XL6476_PS_RKT.dgn		2000				Plot 2
TIME	7:36:40 AM			REGION STATE	FED.AID PROJ.NO.	RAYMON			l-90	PLAN REF NO
DATE	7/19/2023			10 WASH		OF WASHING				RKT2
PLOTTED BY	Rodried			I IO WASH					2.77 MILES WEST OF TINKHAM RD	''''
DESIGNED BY	A. MERCADO			JOB NUMBER		Klews Kawa		Washington State	WB - SLOPE STABILIZATION	SHEET
ENTERED BY	E.RODRIGUEZ			23Y009		56978		3		30
CHECKED BY	T. NETT			CONTRACT NO.	LOCATION NO.	SSIONAL ESCIT		Department of Transportation		OF OF
PROJ. ENGR.	K. KING					SEE SHEET CT1	DATE	_	ROCK SLOPE STABILIZATION TYPICAL	36 SHEETS
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY		P.E. STAMP BOX	P.E. STAMP BOX			SILEIS



NOTES

1. ALL SIGNS ARE CLASS A, BLACK ON ORANGE UNLESS OTHERWISE SPECIFIED.

2. ACTUAL SIGN LOCATONS TO BE STAKED BY THE ENGINEER.

** SIGNS SHALL BE GATED.

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tinkham	Slope Stabilization\Design_CAD_Sheets\410-WZTC\XL6	476_PS_CLA	.dgn							Plot 1
TIME	7:42:42 AM				REGION STATE	FED.AID PROJ.NO.				I-90	PLAN REF NO
DATE	7/19/2023				10 WASH						CS1
PLOTTED BY	Rodried				IU WASH					2.77 MILES WEST OF TINKHAM RD	001
DESIGNED BY	E. RODRIGUEZ				JOB NUMBER				Washington State	WB - SLOPE STABILIZATION	SHEET
ENTERED BY	A. MERCADO				23Y009				J		31
CHECKED BY	T. NETT				CONTRACT NO.	LOCATION NO.			Department of Transportation		OF
PROJ. ENGR.	K. KING						DATE	DATE		CONSTRUCTION SIGNING PLAN	36 SHEETS
REGIONAL ADM	. T. BERENDS	REVISION	DATE	BY			P.E. STAMP BOX	P.E. STAMP BOX			SHEETS

	MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)											
LANE				Pos	ted Sp	eed (n	nph)					
WIDTH (feet)	25	30	35	40	45	50	55	60	65	70		
10	105	150	205	270	450	500	550	_	-	-		
11	115	165	225	295	495	550	605	660	-	-		
12	125	180	245	320	540	600	660	720	780	840		

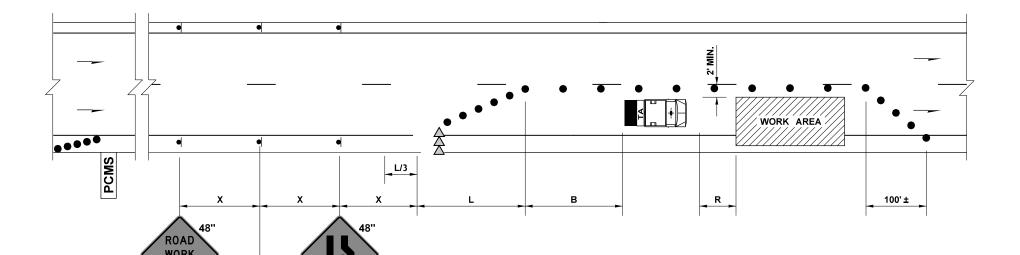
	MINII	NUM S	SHOUL	DER T	APER	LENG	rH = ι	_/3 (fee	et)			
SHOULDER				Pos	ted Sp	eed (n	nph)					
WIDTH (feet)	25	30	35	40	45	50	55	60	65	70		
8'	40	40	60	90	120	130	150	160	170	190		
10'	40	60	90	90	150	170	190	200	220	240		
	USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.											

SIGN SPACING	= X (1)	
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500'± (OR AS PER MUTCD)
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR L	ESS 100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED	TO ACCOMMODATE INTERCHANGE
RAMPS, AT-GRADE INTERSECTIONS	AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED) IN URBAN AREAS TO FIT
ROADWAY CONDITIONS.	

CHANNELIZATION DEVICE SPACING (feet)										
MPH	TAPER	TANGENT								
50/70	40	80								
35/45	30	60								
25/30	20	40								

	BUFFER DATA										
	LONGITUDINAL BUFFER SPACE = B										
SPEED (MF	PH)	25	30	35	40	45	50	55	60	65	70
LENGTH (fe	eet)	155	200	250	305	360	425	495	570	645	730
TRANSP	ORTA	BLE A	TTEN	UATO	R RO	LL AI	HEAD	DIST	ANCE	= R	
	HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.					ŀ		VEHICLE 22,000		SHT	
< 45 MPH	MPH 45-55 MPH			55 MPH	l <	45 MP	н	45-55 N	1PH	> 55 I	MPH
100'	12	23'		172'		74'		100'		150)'



PC	MS
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE ± IN ADVANCE OF LANE CLOSURE SIGNING.

LEGEND

W20-1

W20-5R *

- CLASS A SIGN LOCATION
- CLASS B SIGN LOCATION

SEQUENTIAL ARROW SIGN

PCMS

TRANSPORTABLE ATTENUATOR

PORTABLE CHANGEABLE MESSAGE SIGN

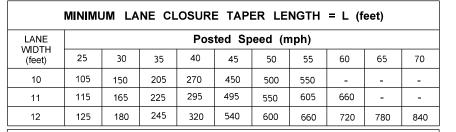
SINGLE-LANE CLOSURE FOR MULTI-LANE ROADWAYS

NOT TO SCALE

NOTES

- 1. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE SPECIFIED.
- 2. EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS SHOULDER IS RECOMMENDED.
- 3. NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
- 4. SEE SPECIAL PROVISIONS FOR LANE CLOSURE HOUR RESTRICTIONS.
- 5. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20'(FT).

FILE NAME	K:\452201\090\03995_Tinkham Slope Stabilization\Design_CAD_Sheets\410-WZTC\XL0	476_PS_TC.do	jn						П
IME	12:11:14 PM		REGION STATE	FED.AID PROJ.NO.				I - 90	
DATE	7/19/2023		10 WAS	.				0 77 MILEO MICOT OF TIME	
LOTTED BY	mercada		10 1170				*/	2.77 MILES WEST OF TINKHAM RD	
DESIGNED BY	A. MERCADO		JOB NUMBER				Washington State	WB - SLOPE STABILIZATION	
ENTERED BY	A. MERCADO		23Y009				3	VID - OLOI E OTABILIZATION	
CHECKED BY	T. NETT		CONTRACT NO.	LOCATION NO.			Department of Transportation		—
PROJ. ENGR.	K. KING				DATE	DATE		TRAFFIC CONTROL	
REGIONAL ADM	T BERENDS REVISION	DATE	RY	1	DE STAMP BOY	DE STAMP BOY			



	MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)									
SHOULDER WIDTH	Posted Speed (mph)									
(feet)	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240

USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.

SIGN SPACING	= X (1))	
FREEWAYS & EXPRESSWAYS	55 / 70 i	MPH 1	500' ±
RURAL HIGHWAYS	60 / 65 i	MPH 8	300' ±
RURAL ROADS	45 / 55 i	MPH !	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 i	MPH :	350'±
RURAL ROADS & URBAN ARTERIALS	25 / 30 ľ	MPH 2	200'± (2)
RESIDENTAL & BUSINESS DISTRICTS			
URBAN STREETS	25 MPH (OR LESS 10	00' ± (2)
(1) ALL SPACING MAY BE ADJUSTED	TO ACCO	OMMODATE	INTERCHANGE

RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.

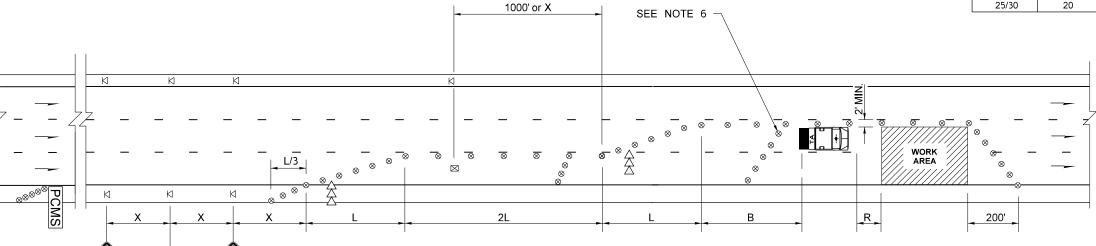
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

PCMS								
1	2							
2 LANES CLOSED AHEAD	WATCH FOR SLOW TRAFFIC							
2.0 SEC	2.0 SEC							

FIELD LOCATE 1 MILE ± IN ADVANCE OF LANE CLOSURE SIGNING.

	BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B											
SPEED (MF	30	35	40	45	50	55	60	65	70		
LENGTH (fe	eet) 155	200	250	305	360	425	495	570	645	730	
TRANSP	ORTABLE A	TTEN	UATO	R RO	LL AI	HEAD	DIST	ANCE	= R		
	HOST VEHICLE WEIGHT 9.900 TO 22.000 lbs.						VEHICLE 22,000		SHT		
< 45 MPH	< 45 MPH 45-55 MPH > 55 MPH			l <	< 45 MPH 45-55 MPH > 55 MP			МРН			
100' 123' 172'				74'		100'		150)'		

CHANNELIZATION DEVICE										
SPACING (feet)										
MPH	TAPER	TANGENT								
50/70	40	80								
35/45	30	60								
25/30	20	40								



DOUBLE-LANE CLOSURE FOR MULTI-LANE ROADWAYS

NOT TO SCALE

DATE

SHOULDER IS RECOMMENDED.

3. NIGHT WORK REQUIRES ADDITIONAL ROADWAY LIGHTING AT FLAGGING STATIONS. SEE THE STANDARD SPECIFICATIONS

2. EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS

- FOR ADDITIONAL DETAILS. 4. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

1. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE SPECIFIED.

- 5. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20'(FT).
- 6. USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000'(FT) (RECOMMENDED).

CLASS B SIGN LOCATION N

TRAFFIC SAFETY DRUM WITH DOUBLE WEIGHTED RINGS

LEGEND



TRANSPORTABLE ATTENUATOR

FILE NAME TIME 12:11:14 PM FED.AID PROJ.NO. DATE 7/19/2023 10 WASH PLOTTED BY mercada JOB NUMBER DESIGNED BY A. MERCADO 23Y009 ENTERED BY A. MERCADO CHECKED BY T. NETT LOCATION NO. PROJ. ENGR. K. KING REVISION DATE BY REGIONAL ADM. T. BERENDS

RIGHT LANE CLOSED

W20-5R

ROAD WORK AHEAD,

W20-1

Washington State **Department of Transportation** DATE

NOTES

I - 90 2.77 MILES WEST OF TINKHAM RD **WB - SLOPE STABILIZATION**

TRAFFIC CONTROL

TC2 SHEET 36 SHEETS

Plot 3

PLAN REF NO

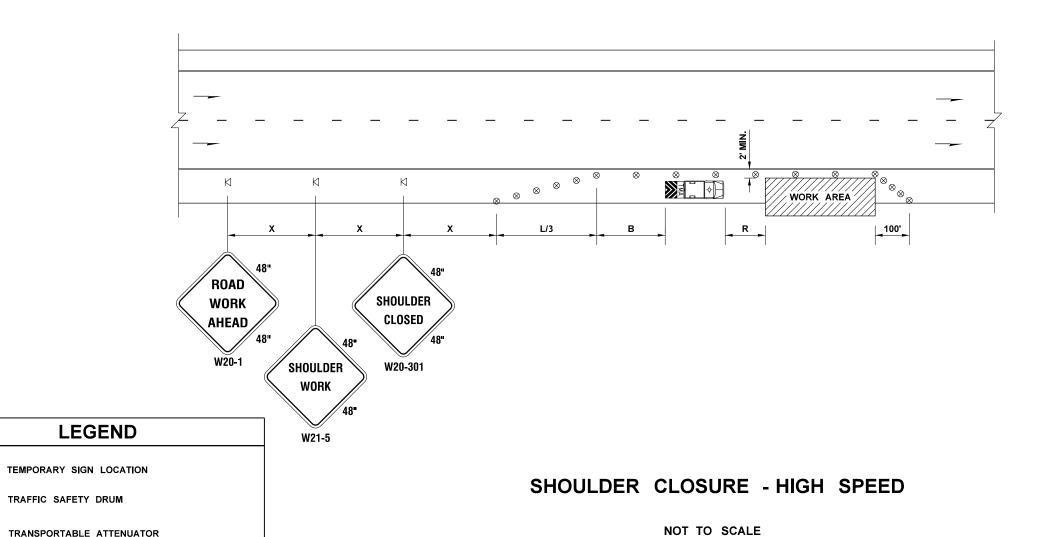
MINIMUM SHOULDER TAPER LENGTH = L/3 (feet)											
SHOULDER	Posted Speed (mph)										
WIDTH (feet)	25	30	35	40	45	50	55	60	65	70	
8'	-	-	-	-	120	130	150	160	170	190	
10'	_	-	-	-	150	170	190	200	220	240	
USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.											

SIGN SPACING	= X (1)	
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	60 / 65 MPH	800′ ±
RURAL ROADS	45 / 55 MPH	500' ±
(1) ALL SPACING MAY BE ADJUSTED TO RAMPS, AT-GRADE INTERSECTIONS AN		INTERCHANGE

	ELIZATION ACING (fe	
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60

BUFFER DATA										
LONGITUDINAL BUFFER SPACE = B										
SPEED (MPH) 25 30 35 40 45 50 55 60 65 70									70	
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730
TRANSPORTA	TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R									

HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs. HOST VEHICLE WEIGHT > 22,000 lbs. 45-55 MPH 45-55 MPH < 45 MPH > 55 MPH < 45 MPH > 55 MPH 100' 123' 172' 74' 150'



NOTES

- 1. NO ENCROACHMENT IN TRAVELED LANE. IF ENCROACHMENT IS NECESSARY, LANE SHALL BE CLOSED.
- 2. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20' (FT) O.C.
- 3. ALL SIGNS ARE BLACK ON ORANGE.

FILE NAME	K:\452201\090\03995_Tinkham	Slope Stabilization\Design_CAD_Sheets\410-WZTC\XL6476	_PS_TC.dgn			
TIME	12:11:15 PM			REGION NO.	STATE	FED.AID P
DATE	7/19/2023				WASH	
PLOTTED BY	mercada			יי ך	WASH	
DECICNED DV	A MEDCADO			IOR N	LIMBER	

TRAFFIC SAFETY DRUM

TRANSPORTABLE ATTENUATOR

TIME	12:11:15 PM				REGION NO.	STATE	FED.AID PROJ.NO.
DATE	7/19/2023				10	WASH	
PLOTTED BY	mercada				10	WASH	
DESIGNED BY	A. MERCADO					IUMBER	
ENTERED BY	A. MERCADO				23Y	009	
CHECKED BY	T. NETT				CONTR	RACT NO.	LOCATION NO.
PROJ. ENGR.	K. KING						
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY			

Washington State
Department of Transportation

DATE

I - 90 2.77 MILES WEST OF TINKHAM RD **WB - SLOPE STABILIZATION**

TRAFFIC CONTROL

TC3 34 OF 36 SHEETS

Plot 3

PLAN REF NO

MINIMUM LANE CLOSURE TAPER LENGTH = L (feet)										
LANE Posted Speed (mph)										
WIDTH (feet)	25	30	35	40	45	50	55	60	65	70
10	105	150	205	270	450	500	550	-	-	-
11	115	165	225	295	495	550	605	660	-	-
12	125	180	245	320	540	600	660	720	780	840

	MINII	MUM S	SHOUL	DER T	APER	LENG	rH = ι	_/3 (fee	et)	
SHOULDER				Pos	ted Sp	eed (n	nph)			
WIDTH (feet)	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240
	USE A	MINIMUM	1 3 DEV	ICES TA	APER FO	OR SHO	ULDER	LESS TH	IEN 8'.	

SIGN SPACING	- Y (1)	
SIGN SPACING	- ^ (1)	
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ± (OR
	AS	PER MUTCD)
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS & URBAN ARTERIALS	25 / 30 MPH	200' ± (2)
RESIDENTIAL & BUSINESS DISTRICTS		
URBAN STREETS	25 MPH OR LES	S 100' ± (2)
(1) ALL SPACING MAY BE ADJUSTED TO	ACCOMMODATE	INTERCHANGE

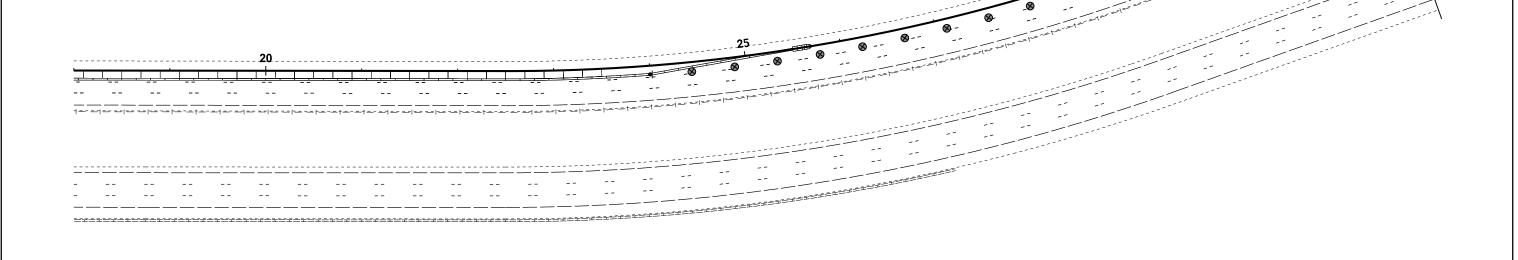
I (1) THE STATE IN THE TREE STEEL	10 /1000 minoby the minetion with
RAMPS, AT-GRADE INTERSECTIONS	AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED	IN URBAN AREAS TO FIT
ROADWAY CONDITIONS.	

CHANNELIZATION DEVICE SPACING (feet)							
MPH	TAPER	TANGENT					
50/70	40	80					
35/45	30	60					
25/30	20	40					

PC	MS
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE ± IN ADVANCE OF LANE CLOSURE SIGNING.

NOTES



LEGEND

TRAFFIC SAFETY DRUM

RIGHT LANE CLOSURE WITH TEMPORARY BARRIER

NOT TO SCALE

FILE NAME TIME FED.AID PROJ.NO. DATE 7/19/2023 10 WASH PLOTTED BY mercada DESIGNED BY A. MERCADO 23Y009 ENTERED BY A. MERCADO CHECKED BY LOCATION NO. K. KING PROJ. ENGR. REGIONAL ADM. T. BERENDS REVISION DATE

Washington State
Department of Transportation

I - 90
2.77 MILES WEST OF TINKHAM RD
WB - SLOPE STABILIZATION
TRAFFIC CONTROL

1. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE SPECIFIED.

4. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20'(FT).

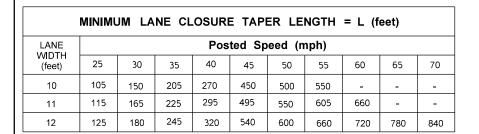
2. EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS

3. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.

5. USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000' (FT).

SHOULDER IS RECOMMENDED.

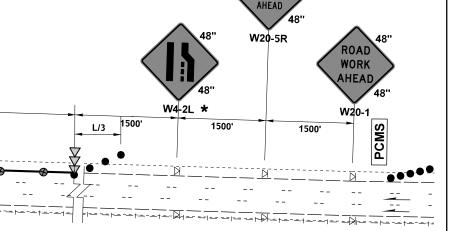
Plot 4
PLAN REF NO
TC4
SHEET
35
OF
36
SHEETS



SIGN SPACING	i = X (1)	
FREEWAYS & EXPRESSWAYS	55 / 70 MPH	1500' ±
RURAL HIGHWAYS	60 /65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
(1) ALL SPACING MAY BE ADJUSTED TO RAMPS, AT-GRADE INTERSECTIONS A		INTERCHANGE

L=840'

CHANNELIZATION DEVICE SPACING (feet)							
TAPER	TANGENT						
40	80						
30	60						
	ACING (fe TAPER 40						



	MINII	MUM S	SHOUL	DER T	APER	LENG	гн = ι	_/3 (fee	et)	
SHOULDER WIDTH				Pos	ted Sp	eed (n	nph)			
(feet)	25	30	35	40	45	50	55	60	65	70
8'	40	40	60	90	120	130	150	160	170	190
10'	40	60	90	90	150	170	190	200	220	240
	USE A MINIMUM 3 DEVICES TAPER FOR SHOULDER LESS THEN 8'.									

LEGEND

PORTABLE CHANGEABLE MESSAGE SIGN

SEQUENTIAL ARROW SIGN

TEMPORARY SIGN LOCATION

TRAFFIC SAFETY DRUM

T LINE 45+00 SEE SHEET TC4

 Δ

PCMS

РС	MS
1	2
RIGHT LANE CLOSURE	1 MILE AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1 MILE ± IN ADVANCE OF LANE CLOSURE SIGNING.

NOTES

- 1. ALL SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE SPECIFIED.
- 2. EXTENDING THE CHANNELIZING DEVICE TAPER ACROSS SHOULDER IS RECOMMENDED.
- 3. SEE **SPECIAL PROVISIONS** FOR WORK HOUR RESTRICTIONS.
- 4. DEVICE SPACING FOR THE DOWNSTREAM TAPER SHALL BE 20'(FT).
- 5. USE TRANSVERSE DEVICES IN CLOSED LANE EVERY 1000'(FT).

RIGHT LANE CLOSURE WITH TEMPORARY BARRIER

DATE

NOT TO SCALE

FILE NAME	K:\452201\090\03995_Tinkham	Slope Stabilization\Design_CAD_Sheets\410-Wa	ZTC\XL6476_PS_TC.dg	jn			
TIME	12:11:16 PM				REGION NO.	STATE	FED.AID PROJ.NO.
DATE	7/19/2023					WASH	
PLOTTED BY	mercada				10	WASH	
DESIGNED BY	A. MERCADO					UMBER	
ENTERED BY	A. MERCADO				23Y	009	
CHECKED BY	T. NETT				CONTR	ACT NO.	LOCATION NO.
PROJ. ENGR.	K. KING						
REGIONAL ADM.	T. BERENDS	REVISION	DATE	BY			

₹	
Washington State Department of Transportation	

DATE

I - 90 2.77 MILES WEST OF TINKHAM RD WB - SLOPE STABILIZATION

TRAFFIC CONTROL

36 of 36 sheets

Plot 5

PLAN REF NO